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Service Manual

ORDER NO.
CRT4135

6-DISC DVD AV RECEIVER

AVH-P6000DVD/UC
AVH-P6000DVD/RE
AVH-P6050DVD/RD
AVH-P6050DVD/RC
AVH-P6050DVD/RI

DVD is a trademark of DVD Format/Logo Licensing Corporation.

This service manual should be used together with the following manual(s) listed below. For the parts numbers, adjustments, etc. which are not shown in this manual, refer to the following manual(s).

Model No.	Order No.	Mech. Module	Remarks
AVH-P6800DVD/UC	CRT3680		
CX-3150	CRT3495	MG4	DVD Mech. Module : Circuit Descriptions, Mech. Overview, Disassembly, How to Assemble

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SAFTY INFORMATION

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

This product contains mercury. Disposal of this material may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronics Industries Alliance: www.eiae.org.

The backlighting lamp of LCD in this equipment contains mercury. Disposal of this material may be regulated due to environmental considerations according to Local, State or Federal Laws. For disposal or recycling information, please contact your local authorities or the Electronics Industries Alliance: www.eiae.org

EXPLODED VIEWS AND PARTS LIST

PACKING(Page 12)

PACKING SECTION PARTS LIST

* : Non spare part

Mark	No.	Description	AVH-P6800DVD/UC	AVH-P6000DVD/UC
	1	Cord Assy	CDE7321	Not used
	16	Unit Box	CHG5774	CHG6560
	17	Contain Box	CHL5774	CHL6560
	21	Owner's Manual	CRB2171	CRB2798
	22	Owner's Manual	CRB2172	CRB2799
	24	Installation Manual	CRD4075	CRD4356
*	27	Registration Card	CRY1229	Not used
*		Caution Card	CRN1089	Not used
*		Caution Card	CRN1090	Not used

Mark	No.	Description	AVH-P6800DVD/RE	AVH-P6000DVD/RE
	1	Cord Assy	CDE7321	Not used
	16	Unit Box	CHG5778	CHG6559
	17	Contain Box	CHL5778	CHL6559
	21	Owner's Manual	CRB2213	CRB2796
	22	Owner's Manual	CRB2215	CRB2797
	24	Installation Manual	CRD4074	CRD4355

Mark	No.	Description	AVH-P6850DVD/RD	AVH-P6050DVD/RD
	1	Cord Assy	CDE7321	Not used
	16	Unit Box	CHG5775	CHG6561
	17	Contain Box	CHL5776	CHL6562
	21	Owner's Manual	CRB2163	CRB2800
	22	Owner's Manual	CRB2166	CRB2803
	23	Owner's Manual	CRB2167	CRB2804
	24	Installation Manual	CRD4073	CRD4358

Mark	No.	Description	AVH-P6850DVD/RC	AVH-P6050DVD/RC
	1	Cord Assy	CDE7321	Not used
	16	Unit Box	CHG5775	CHG6561
	17	Contain Box	CHL5775	CHL6561
	21	Owner's Manual	CRB2163	CRB2800
	22	Owner's Manual	CRB2165	CRB2801
	23	Owner's Manual	CRB2273	CRB2802
	24	Installation Manual	CRD4072	CRD4357

Mark	No.	Description	AVH-P6850DVD/RI	AVH-P6050DVD/RI
	1	Cord Assy	CDE7321	Not used
	16	Unit Box	CHG5775	CHG6561
	17	Contain Box	CHL5777	CHL6563
	21	Owner's Manual	CRB2163	CRB2800
	22	Owner's Manual	CRB2164	CRB2805
	24	Installation Manual	CRD4071	CRD4359

Owner's Manual, Installation Manual

Part No.	Language
CRB2796	English
CRB2797	Russian
CRB2798	English
CRB2799	French
CRB2800	English
CRB2801	Traditional Chinese
CRB2802	Korean
CRB2803	Spanish
CRB2804	Portuguese(B)
CRB2805	Arabic
CRD4355	English, Russian
CRD4356	English, French
CRD4357	English, Traditional Chinese, Korean
CRD4358	English, Spanish, Portuguese(B)
CRD4359	English, Arabic

EXTERIOR(1)(Page 14)

EXTERIOR(1) SECTION PARTS LIST

Mark	No.	Description	AVH-P6800DVD/UC	AVH-P6000DVD/UC
	1	Cord Assy	CDE7321	Not used
	2	Cap	CNS1472	Not used
	13	Button (BAND)	CAC9731	CAI1967
	14	Button (TRACK)	CAC9732	CAI1968
	15	Button (VOL-)	CAC9733	CAI1969
	17	Button (VOL+)	CAC9735	CAI1970
	18	Button (ENT,WIDE,V.ADJ,OPEN)	CAC9736	CAI1971
	25	Grille	CNS8593	CNS9529

Mark	No.	Description	AVH-P6800DVD/RE	AVH-P6000DVD/RE
	1	Cord Assy	CDE7321	Not used
	2	Cap	CNS1472	Not used
	13	Button (BAND)	CAC9731	CAI1967
	14	Button (TRACK)	CAC9732	CAI1968
	15	Button (VOL-)	CAC9733	CAI1969
	17	Button (VOL+)	CAC9735	CAI1970
	18	Button (ENT,WIDE,V.ADJ,OPEN)	CAC9736	CAI1971
	25	Grille	CNS8593	CNS9529

Mark	No.	Description	AVH-P6850DVD/RD AVH-P6850DVD/RC AVH-P6850DVD/RI	AVH-P6050DVD/RD AVH-P6050DVD/RC AVH-P6050DVD/RI
	1	Cord Assy	CDE7321	Not used
	2	Cap	CNS1472	Not used
	13	Button (BAND)	CAC9731	CAI1967
	14	Button (TRACK)	CAC9732	CAI1968
	15	Button (VOL-)	CAC9733	CAI1969
	17	Button (VOL+)	CAC9735	CAI1970
	18	Button (ENT,WIDE,V.ADJ,OPEN)	CAC9736	CAI1971
	25	Grille	CNS8594	CNS9530

EXTERIOR(2)(Page 16)

EXTERIOR(2) SECTION PARTS LIST

Mark	No.	Description	AVH-P6800DVD/UC AVH-P6800DVD/RE AVH-P6850DVD/RD AVH-P6850DVD/RC AVH-P6850DVD/RI	AVH-P6000DVD/UC AVH-P6000DVD/RE AVH-P6050DVD/RD AVH-P6050DVD/RC AVH-P6050DVD/RI
	13	Cord Assy	CDE8154	CDE8697

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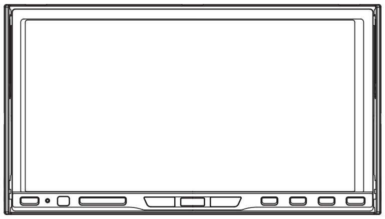
Service Manual


AVH-P6800DVD/UC

ORDER NO.
CRT3680

AV RECEIVER/6-DISC CHANGER WITH 7 INCH WIDE DISPLAY

AVH-P6800DVD/UC
AVH-P6800DVD/RE
AVH-P6850DVD/RD
AVH-P6850DVD/RC
AVH-P6850DVD/RI

This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech.Module	Remarks
CX-3150	CRT3495	MG4	DVD Mech. Module:Circuit Descriptions, Mech. Overview, Disassembly, How to Assemble

For details, refer to "Important Check Points for Good Servicing".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
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SAFETY INFORMATION

Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

This product contains mercury. Disposal of this material may be regulated due to environmental considerations.
For disposal or recycling information, please contact your local authorities or the Electronics Industries Alliance: www.eiae.org.

1. Safety Precautions for those who Service this Unit.

- **Follow the adjustment steps in the service manual when servicing this unit. When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.**

Caution:

1. **During repair or tests, minimum distance of 13 cm from the focus lens must be kept.**
2. **During repair or tests, do not view laser beam for 10 seconds or longer.**

WARNING!

The AEL (accessible emission level)of the laser power output is less than CLASS 1 but the laser component is capable of emitting radiation exceeding the limit for CLASS 1.
A specially instructed person should do servicing operation of the apparatus.

Laser diode characteristics
Wave length:
DVD:640 nm to 660 nm
CD:770 nm to 810 nm
DVD : 2.48 mW(Emitting period :9 sec.)
CD : 705 μW(Emitting period : unlimited)

Additional Laser Caution

Transistors Q1101 and Q1102 in PCB drive the laser diodes for DVD and CD respectively. When Q1101 or Q1102 is shorted between their terminals, the laser diodes for DVD or CD will radiate beam. If the top cover is removed with no disc loaded while such short-circuit is continued, the naked eyes may be exposed to the laser beam.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replaced only with the same or equivalent type recommended by the manufacture.
Discord used batteries according to the manufacture's instructions.

● Service Precautions !

1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. Be careful in handling ICs. Some ICs such as MOS type are so fragile that they can be damaged by electrostatic induction.

● DVD and CD section precaution

1. EJECT LOCK MODE for DVD mechanism
   In order to enter "EJECT LOCK" mode, reset start while pressing the "VOL+" and "V.ADJ" keys together.
   Pressing the "VOL+" and "V.ADJ" keys until monitor backlight is turned on.
   In order to exit "EJECT LOCK" mode, follow the same steps to enter this mode.
2. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
3. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) by referring to "the DISASSEMBLY" .

● AVH-P6800DVD/UC

When AVH-P6800DVD/UC is connected to either NAVI or VDP, the NAVI screen or the VDP screen may flicker left and right. In such a case, press RESET while pressing SRC key and V.ADJ key. After the reset, a high tone blip sound will be heard, and either NAVI or VDP will be displayed at the center of the screen. The default setting is VDP.
Even if the setting is made to VDP, it is not a problem as long as the NAVI screen is properly displayed.

DVD is a trademark of DVD Format/Logo Licensing Corporation.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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1. SPECIFICATIONS

● AVH-P6800DVD/UC

General

Rated power source .... 14.4 V DC (allowable voltage range: 12.0 V to 14.4 V DC)
Grounding system .... Negative type
Max. current consumption
.... 10.0 A
Backup current......................... 3 mA or less
Dimensions (W × H × D):
DIN
Chassis .... 178 × 100 × 166 mm (7 × 3-7/8 × 6-1/2 in.)
Nose .... 171 × 96 × 16 mm (6-3/4 × 3-3/4 × 5/8 in.)
Weight .... 3.0 kg (6.6 lbs)

Display

Screen size/aspect ratio .... 7.0 inch wide/16:9 (effective display area: 156 × 82 mm)
Pixels .... 336,960 (1,440 × 234)
Type .... TFT active matrix, transmissive type
Color system .... NTSC compatible
Storage temperature range
.... –20 °C to +80 °C
Angle adjustment .... 0° to 21° (initial settings: 0°)

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15 000 Hz with no more than 5% THD.

Maximum power output .... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance .... 4 Ω to 8 Ω × 4
4 Ω to 8 Ω × 2 + 2 Ω × 1
Preout max output level/output impedance
.... 4.0 V/100Ω
Equalizer (3-Band Parametric Equalizer):
Low
Frequency .... 40/80/100/160 Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12 dB
Mid
Frequency .... 200/500/1k/2k Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12 dB
High
Frequency .... 3.15k/8k/10k/12.5k Hz
Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain .... ±12 dB
Loudness contour:
Low .... +3.5 dB (100 Hz), +3 dB (10 kHz)
Mid .... +10 dB (100 Hz), +6.5 dB (10 kHz)
High .... +11 dB (100 Hz), +11 dB (10 kHz)
(volume: –30 dB)
HPF:
Frequency .... 50/80/125 Hz
Slope .... –12 dB/oct
Subwoofer:
Frequency .... 50/80/125 Hz
Slope .... –18 dB/oct
Gain .... ±12 dB
Phase .... Normal/Reverse

DVD Player

System .... DVD video, Video CD, Compact disc audio system
Usable discs .... DVD video, Video CD, Compact disc
Region number 1
Signal format:
Sampling frequency ..... 44.1/48/96 kHz
Number of quantization bits
.... 16/20/24; linear
Frequency response .... 5 Hz to 44 000 Hz (with DVD, at sampling frequency 96 kHz)
Signal-to-noise ratio .... 97 dB (1 kHz) (IHF-A network)
(CD: 96 dB (1 kHz) (IHF-A network))
Dynamic range .... 95 dB (1 kHz)
(CD: 94 dB (1 kHz))
Distortion .... 0.008 % (1 kHz)
Output level:
Video .... 1.0 Vp-p/75 Ω (±0.2 V)
Number of channels .... 2 (stereo)
MP3 decoding format .... MPEG-1 & 2 Audio Layer 3
WMA decoding format .... Ver. 7 & 8

FM tuner

Frequency range .... 87.9 MHz to 107.9 MHz

Usable sensitivity	8 dBf (0.7 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity	10 dBf (0.9 µV/75 Ω, mono)
Signal-to-noise ratio	75 dB (IHF-A network)
Distortion	0.3 % (at 65 dBf, 1 kHz, stereo) 0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response	30 Hz to 15 000 Hz (±3 dB)
Stereo separation	45 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range	530 kHz to 1 710 kHz (10 kHz)
Usable sensitivity	18 µV (S/N: 20 dB)
Signal-to-noise ratio	65 dB (IHF-A network)

Note

Specifications and the design are subject to possible modifications without notice due to improvements. ■

General

Rated power source	14.4 V DC (allowable voltage range: 12.0 V to 14.4 V DC)
Grounding system	Negative type
Max. current consumption	10.0 A
Backup current	3 mA or less
Dimensions (W × H × D):	
DIN	
Chassis	178 × 100 × 166 mm
Nose	171 × 96 × 16 mm
Weight	3.0 kg

Display

Screen size/aspect ratio	7.0 inch wide/16:9 (effective display area: 156 × 82 mm)
Pixels	336,960 (1,440 × 234)
Type	TFT active matrix, transmissive type
Color system	NTSC/PAL/SECAM compatible
Storage temperature range	–20 °C to +80 °C
Angle adjustment	0° to 21° (initial settings: 0°)

Audio

Continuous power output	27 W × 4 (DIN 45324, +B=14.4 V)
Maximum power output	50 W × 4 50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance	4 Ω (4 Ω to 8 Ω allowable)
Preout max output level/output impedance	4.0 V/100Ω
Equalizer (3-Band Parametric Equalizer):	
Low	
Frequency	40/80/100/160 Hz
Q Factor	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain	±12 dB
Mid	
Frequency	200/500/1k/2k Hz
Q Factor	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain	±12 dB
High	
Frequency	3.15k/8k/10k/12.5k Hz
Q Factor	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain	±12 dB
Loudness contour:	
Low	+3.5 dB (100 Hz), +3 dB (10 kHz)
Mid	+10 dB (100 Hz), +6.5 dB (10 kHz)
High	+11 dB (100 Hz), +11 dB (10 kHz) (volume: –30 dB)
HPF:	
Frequency	50/80/125 Hz
Slope	–12 dB/oct
Subwoofer:	
Frequency	50/80/125 Hz
Slope	–18 dB/oct
Gain	±12 dB
Phase	Normal/Reverse

DVD Player

System	DVD video, Video CD, Compact disc audio system
Usable discs	DVD video, Video CD, Compact disc
Region number	5
Signal format:	
Sampling frequency	44.1/48/96 kHz
Number of quantization bits	16/20/24; linear
Frequency response	5 Hz to 44 000 Hz (with DVD, at sampling frequency 96 kHz)
Signal-to-noise ratio	97 dB (1 kHz) (IEC-A network) (CD: 96 dB (1 kHz) (IEC-A network))
Dynamic range	95 dB (1 kHz) (CD: 94 dB (1 kHz))
Distortion	0.008 % (1 kHz)
Output level:	
Video	1.0 Vp-p/75 Ω (±0.2 V)
Number of channels	2 (stereo)
MP3 decoding format	MPEG-1 & 2 Audio Layer 3
WMA decoding format	Ver. 7 & 8

FM tuner

Frequency range	87.5 MHz to 108.0 MHz
Usable sensitivity	8 dBf (0.7 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity	10 dBf (0.9 μV/75 Ω, mono)

Signal-to-noise ratio	75 dB (IEC-A network)
Distortion	0.3 % (at 65 dBf, 1 kHz, stereo) 0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response	30 Hz to 15 000 Hz (±3 dB)
Stereo separation	45 dB (at 65 dBf, 1 kHz)
Selectivity	80 dB (±200 kHz)

AM tuner

Frequency range	531 kHz to 1 602 kHz (9 kHz) 530 kHz to 1 640 kHz (10 kHz)
Usable sensitivity	18 μV (S/N: 20 dB)
Signal-to-noise ratio	65 dB (IEC-A network)

Note

Specifications and the design are subject to possible modifications without notice due to improvements. ■

General

Rated power source .... 14.4 V DC (allowable voltage range: 12.0 V to 14.4 V DC)
Grounding system .... Negative type
Max. current consumption
.... 10.0 A
Backup current........................ 3 mA or less
Dimensions (W × H × D):
  DIN
    Chassis .... 178 × 100 × 166 mm
    Nose .... 171 × 96 × 16 mm
Weight .... 3.0 kg

Display

Screen size/aspect ratio .... 7.0 inch wide/16:9 (effective display area: 156 × 82 mm)
Pixels .... 336,960 (1,440 × 234)
Type .... TFT active matrix, transmissive type
Color system .... NTSC/PAL/PAL-M/SECAM compatible
Storage temperature range
.... –20 °C to +80 °C
Angle adjustment .... 0° to 21° (initial settings: 0°)

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15 000 Hz with no more than 5% THD.

Maximum power output .... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance .... 4 Ω (4 Ω to 8 Ω allowable)
Preout max output level/output impedance
.... 4.0 V/100Ω
Equalizer (3-Band Parametric Equalizer):
  Low
    Frequency .... 40/80/100/160 Hz
    Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
    Gain .... ±12 dB
  Mid
    Frequency .... 200/500/1k/2k Hz
    Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
    Gain .... ±12 dB
  High
    Frequency .... 3.15k/8k/10k/12.5k Hz
    Q Factor .... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
    Gain .... ±12 dB
Loudness contour:
  Low .... +3.5 dB (100 Hz), +3 dB (10 kHz)
  Mid .... +10 dB (100 Hz), +6.5 dB (10 kHz)
  High .... +11 dB (100 Hz), +11 dB (10 kHz)
  (volume: –30 dB)
HPF:
  Frequency .... 50/80/125 Hz
  Slope .... –12 dB/oct
Subwoofer:
  Frequency .... 50/80/125 Hz
  Slope .... –18 dB/oct
  Gain .... ±12 dB
  Phase .... Normal/Reverse

DVD Player

System .... DVD video, Video CD, Compact disc audio system
Usable discs .... DVD video, Video CD, Compact disc
Region number:
  for Southeast Asian models
  3
  for South American and Oceanian models
  4
  for Middle East Asian and South African models
  2
Signal format:
  Sampling frequency ..... 44.1/48/96 kHz
  Number of quantization bits
  .... 16/20/24; linear
Frequency response .... 5 Hz to 44 000 Hz (with DVD, at sampling frequency 96 kHz)
Signal-to-noise ratio .... 97 dB (1 kHz) (IEC-A network)
(CD: 96 dB (1 kHz) (IEC-A network))
Dynamic range .... 95 dB (1 kHz)
(CD: 94 dB (1 kHz))
Distortion .... 0.008 % (1 kHz)
Output level:
  Video .... 1.0 Vp-p/75 Ω (±0.2 V)
Number of channels .... 2 (stereo)
MP3 decoding format .... MPEG-1 & 2 Audio Layer 3

WMA decoding format	Ver. 7 & 8

FM tuner

Frequency range	87.5 MHz to 108.0 MHz
Usable sensitivity	8 dBf (0.7 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity	10 dBf (0.9 µV/75 Ω, mono)
Signal-to-noise ratio	75 dB (IEC-A network)
Distortion	0.3 % (at 65 dBf, 1 kHz, stereo) 0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response	30 Hz to 15 000 Hz (±3 dB)
Stereo separation	45 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range	531 kHz to 1 602 kHz (9 kHz) 530 kHz to 1 640 kHz (10 kHz)
Usable sensitivity	18 µV (S/N: 20 dB)
Signal-to-noise ratio	65 dB (IEC-A network)

Infrared remote control

Wavelength	945 nm
Output	typ; 10 mw/sr per Infrared LED

Note

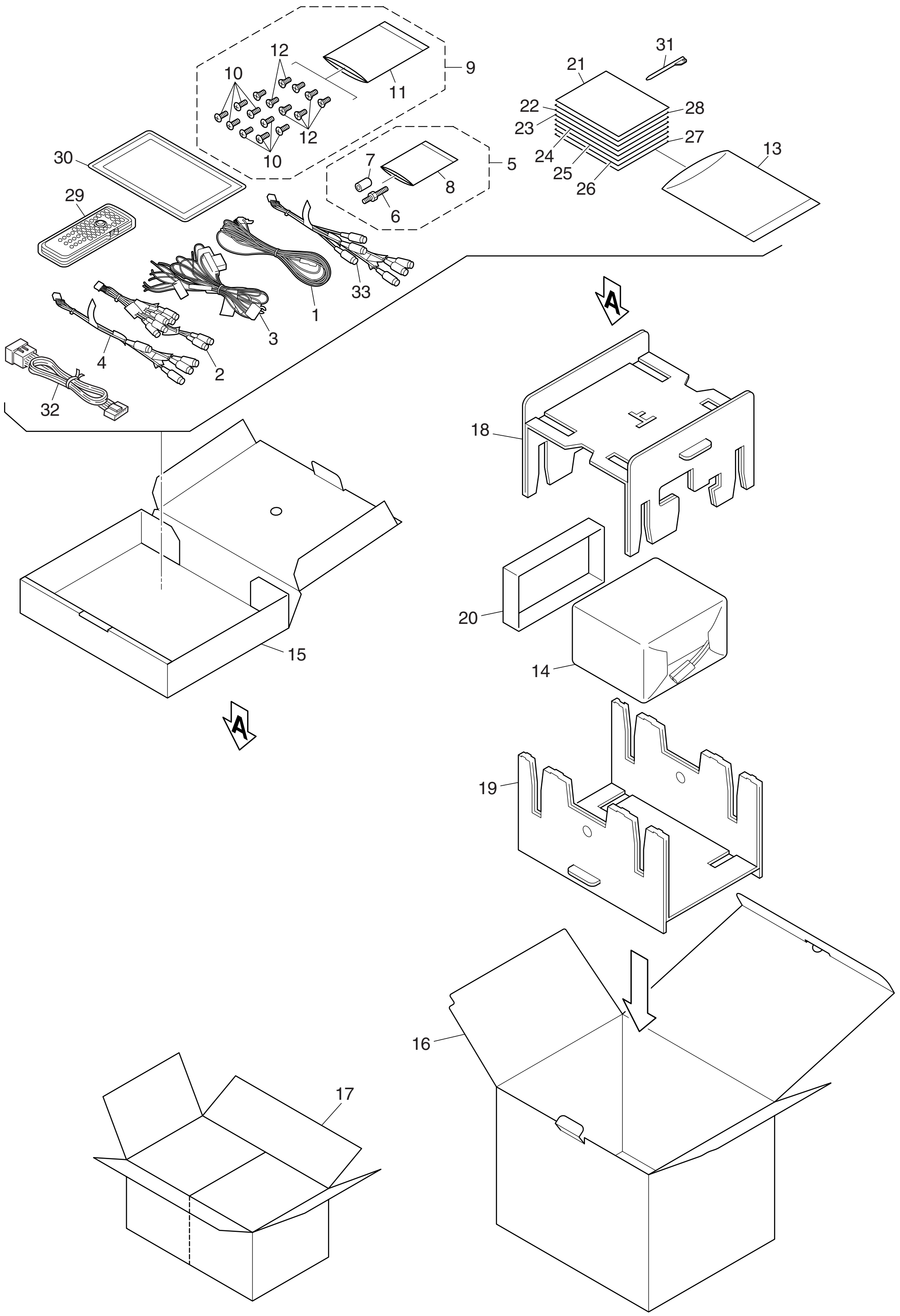
Specifications and the design are subject to possible modifications without notice due to improvements. ■

2. EXPLODED VIEWS AND PARTS LIST

NOTES : • *Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.*

- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screw adjacent to ▽ mark on the product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions,apply as you think it appropriate.)*

2.1 PACKING



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PACKING SECTION PARTS LIST

Mark	No.	Description	AVH-P6800DVD /UC	AVH-P6800DVD /RE	AVH-P6850DVD /RD	AVH-P6850DVD /RC	AVH-P6850DVD /RI
	1	Cord Assy	CDE7321	CDE7321	CDE7321	CDE7321	CDE7321
	2	Cord Assy	CDE7815	CDE7815	CDE7815	CDE7815	CDE7815
	3	Cord Assy	CDE8215	Not used	CDE8215	CDE8215	CDE8215
	4	Cord Assy	CDE8255	Not used	Not used	Not used	Not used
	5	Accessory Assy	CEA3743	CEA3743	CEA3743	CEA3743	CEA3743
	6	Screw	CBA1650	CBA1650	CBA1650	CBA1650	CBA1650
	7	Bush	CNV1917	CNV1917	CNV1917	CNV1917	CNV1917
*	8	Polyethylene Bag	E36-615	E36-615	E36-615	E36-615	E36-615
	9	Screw Assy	CEA3797	CEA3797	CEA3797	CEA3797	CEA3797
	10	Screw	BMZ50P060FTC	BMZ50P060FTC	BMZ50P060FTC	BMZ50P060FTC	BMZ50P060FTC
*	11	Polyethylene Bag	CEG-127	CEG-127	CEG-127	CEG-127	CEG-127
	12	Screw	CMZ50P060FTC	CMZ50P060FTC	CMZ50P060FTC	CMZ50P060FTC	CMZ50P060FTC
	13	Polyethylene Bag	CEG1116	CEG1116	CEG1116	CEG1116	CEG1116
	14	Cover	CEG1177	CEG1074	CEG1074	CEG1074	CEG1074
	15	Sub Carton	CHA3298	CHA3298	CHA3298	CHA3298	CHA3298
	16	Carton	CHG5774	CHG5778	CHG5775	CHG5775	CHG5775
	17	Contain Box	CHL5774	CHL5778	CHL5776	CHL5775	CHL5777
	18	Protector(Upper)	CHP2227	CHP2227	CHP2227	CHP2227	CHP2227
	19	Protector	CHP2272	CHP2272	CHP2272	CHP2272	CHP2272
	20	Protector	CHP3202	CHP3202	CHP3202	CHP3202	CHP3202
	21	Owner's Manual	CRB2171	CRB2213	CRB2163	CRB2163	CRB2163
	22	Owner's Manual	CRB2172	CRB2215	CRB2166	CRB2165	CRB2164
	23	Owner's Manual	Not used	Not used	CRB2167	CRB2273	Not used
	24	Installation Manual	CRD4075	CRD4074	CRD4073	CRD4072	CRD4071
	25	Caution Card	CRP1310	CRP1310	CRP1310	CRP1310	CRP1310
*	26	Warranty Card	CRY1246	CRY1157	Not used	Not used	Not used
*	27	Registration Card	CRY1229	Not used	Not used	Not used	Not used
*	28	Caution Card	CRP1342	CRP1342	CRP1342	CRP1342	CRP1342
	29	Remote Control Unit	CXC6317	CXC6317	CXC6317	CXC6317	CXC6317
	30	Panel	CNS8669	CNS8669	CNS8669	CNS8669	CNS8669
	31	Pen	CNV8969	CNV8969	CNV8969	CNV8969	CNV8969
	32	Cord Assy	Not used	CDE8253	Not used	Not used	Not used
	33	Cord Assy	Not used	CDE8263	CDE8263	CDE8263	CDE8263

Owner's Manual,Installation Manual

Part No.	Language
CRB2171	English
CRB2172	French
CRD4075	English, French
CRB2213	English
CRB2215	Russian
CRD4074	English, Russian
CRB2163	English
CRB2166	Spanish
CRB2167	Portuguese(B)
CRD4073	English, Spanish, Portuguese(B)
CRB2165	Traditional Chinese
CRB2273	Korean
CRD4072	English, Traditional Chinese, Korean
CRB2164	Arabic
CRD4071	English, Arabic

2.2 EXTERIOR (1)

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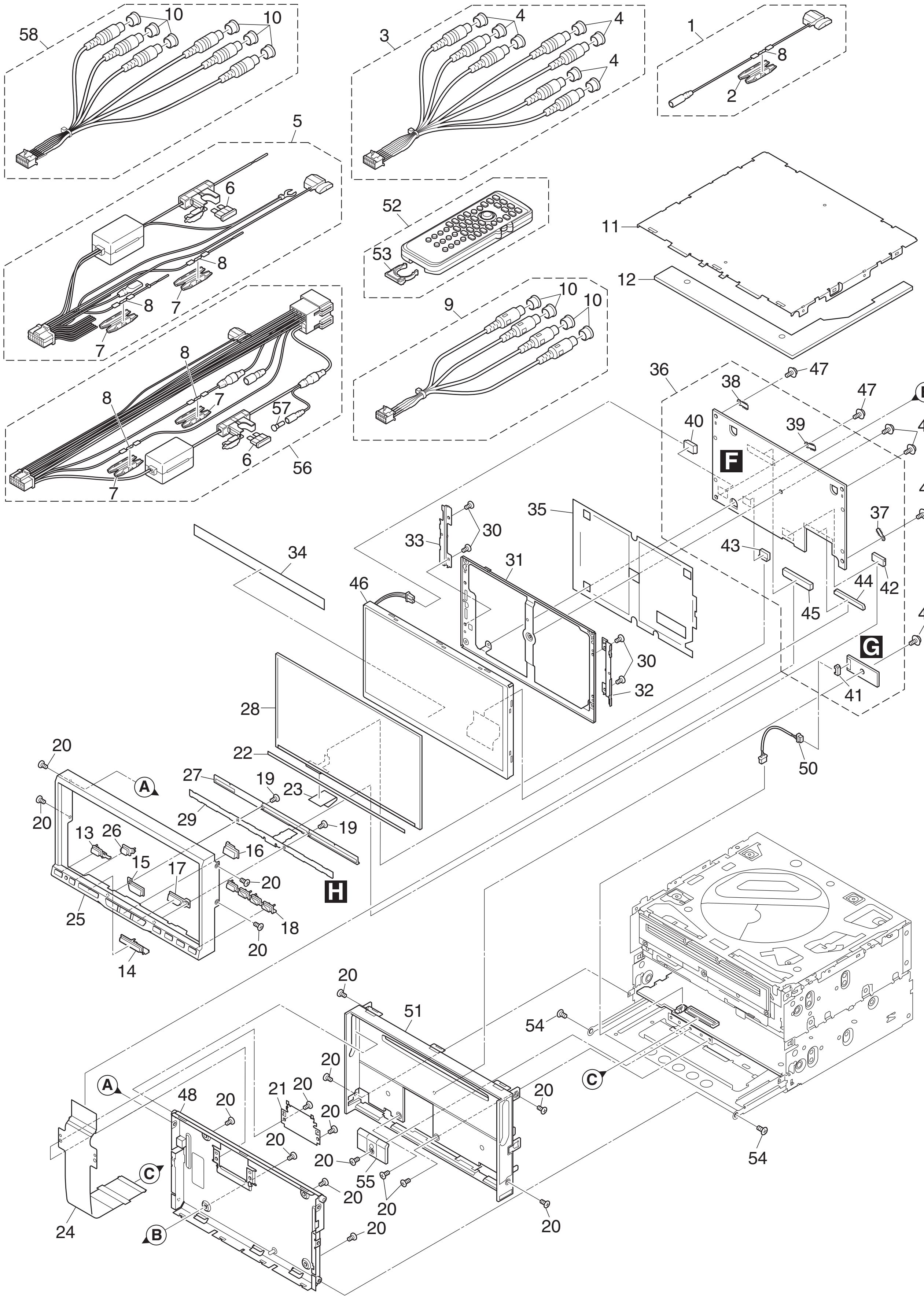
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(1) EXTERIOR (1) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Cord Assy	CDE7321
	2	Cap	CNS1472
	3	Cord Assy	CDE7815
	4	Cap	CNV6727
	5	Cord Assy	See Contrast table(2)
⚠	6	Fuse(10 A)	CEK1136
	7	Cap	CNS1472
	8	Resistor	RS1/2PMF102J
	9	Cord Assy	See Contrast table(2)
	10	Cap	CNV6727
	11	Case	CNB3278
	12	Cushion	CNN1308
	13	Button(BAND)	CAC9731
	14	Button(TRACK)	CAC9732
	15	Button(VOL-)	CAC9733
	16	Button(SRC)	CAC9734
	17	Button(VOL+)	CAC9735
	18	Button(ENT,WIDE,V.ADJ,OPEN)	CAC9736
	19	Screw(M2 x 5)	CBA1875
	20	Screw(M2 x 3)	CBA1877
	21	Holder	CND3300
	22	Sheet	CNN1102
	23	Sheet	CNN1423
	24	Flexible PCB	CNP9191
	25	Grille	See Contrast table(2)
	26	Plate	CNS8597
	27	Spacer	CNV9123
	28	Touch Panel	CSX1093
	29	Key Unit	CWN1686
	30	Screw(M2 x 2)	CBA1771

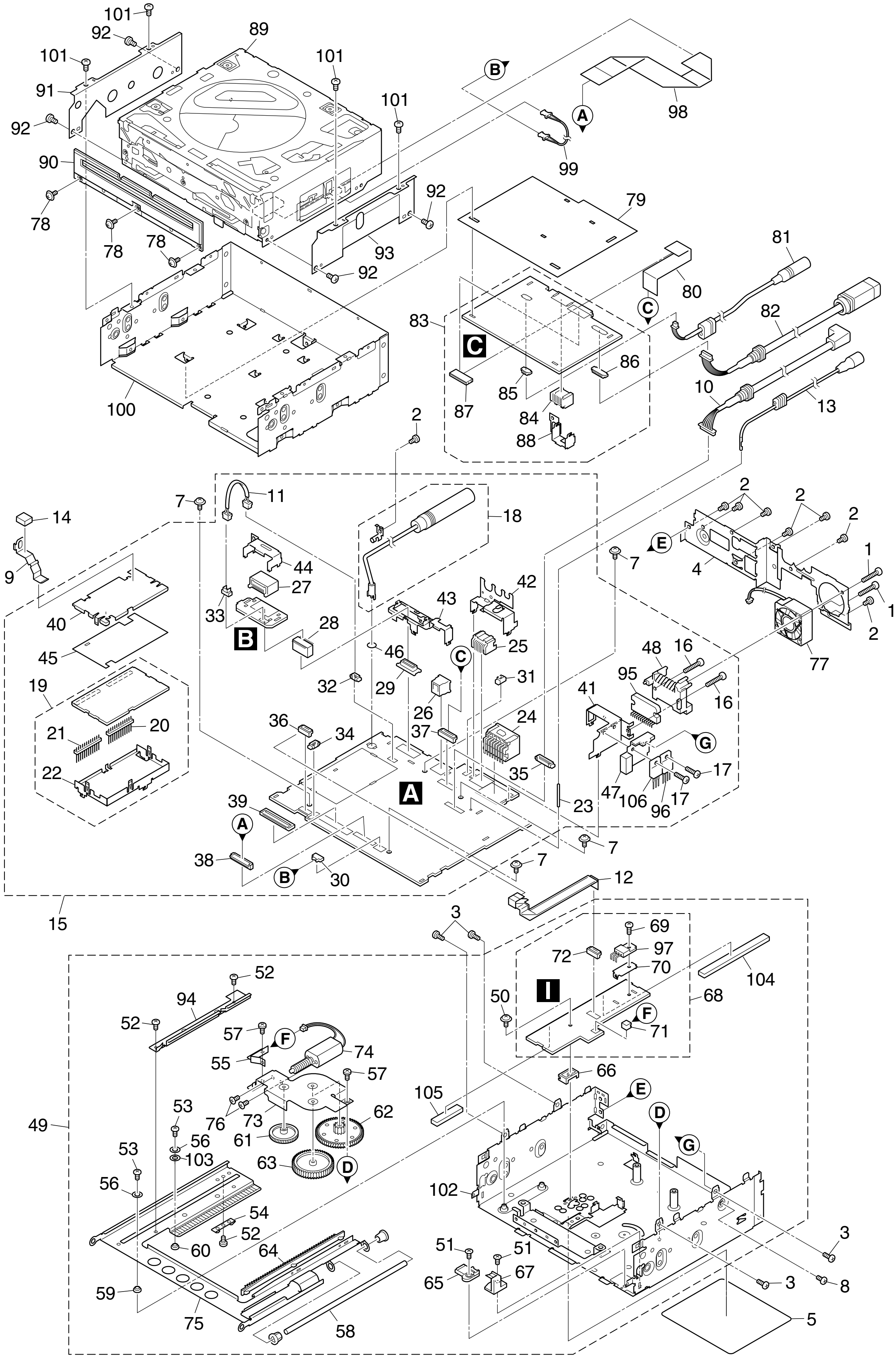
Mark	No.	Description	Part No.
	31	Holder	CND3014
	32	Holder	CND3015
	33	Holder	CND3016
	34	Insulator	CNM9811
	35	Insulator	CNN1106
	36	Monitor Unit	CWN1683
	37	Terminal(CN4204)	CKF1064
	38	Terminal(CN4205)	CKF1064
	39	Terminal(CN4206)	CKF1064
	40	Connector(CN4101)	CKS4428
	41	Connector(CN4951)	CKS4979
	42	Connector(CN4202)	CKS5041
	43	Connector(CN4201)	CKS5105
	44	Connector(CN4901)	CKS5111
	45	Connector(CN4203)	CKS5547
	46	LCD Module	CWX3263
	47	Screw	PMB20P040FTC
	48	Case Unit	CXC6260
	49	Screw(M2 x 6)	CBA1951
	50	Cord	CDE8153
	51	Panel Unit	See Contrast table(2)
	52	Remote Control Unit	CXC6317
	53	Cover	CZN7062
	54	Screw(M2 x 2)	CBA1735
	55	Holder	CNV9039
	56	Cord Assy	See Contrast table(2)
	57	Cover	See Contrast table(2)
	58	Cord Assy	See Contrast table(2)

(2) CONTRAST TABLE

AVH-P6800DVD/UC, AVH-P6800DVD/RE, AVH-P6850DVD/RD, AVH-P6850DVD/RC and AVH-P6850DVD/RI are constructed the same except for the following:

Mark	No.	Description	AVH-P6800DVD /UC	AVH-P6800DVD /RE	AVH-P6850DVD /RD	AVH-P6850DVD /RC	AVH-P6850DVD /RI
	5	Cord Assy	CDE8215	Not used	CDE8215	CDE8215	CDE8215
	9	Cord Assy	CDE8255	Not used	Not used	Not used	Not used
	25	Grille	CNS8593	CNS8593	CNS8594	CNS8594	CNS8594
	51	Panel Unit	CXC6258	CXC6261	CXC6259	CXC6259	CXC6259
	56	Cord Assy	Not used	CDE8253	Not used	Not used	Not used
	57	Cover	Not used	CKX-003	Not used	Not used	Not used
	58	Cord Assy	Not used	CDE8263	CDE8263	CDE8263	CDE8263

2.3 EXTERIOR (2)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(1) EXTERIOR (2) SECTION PARTS LIST

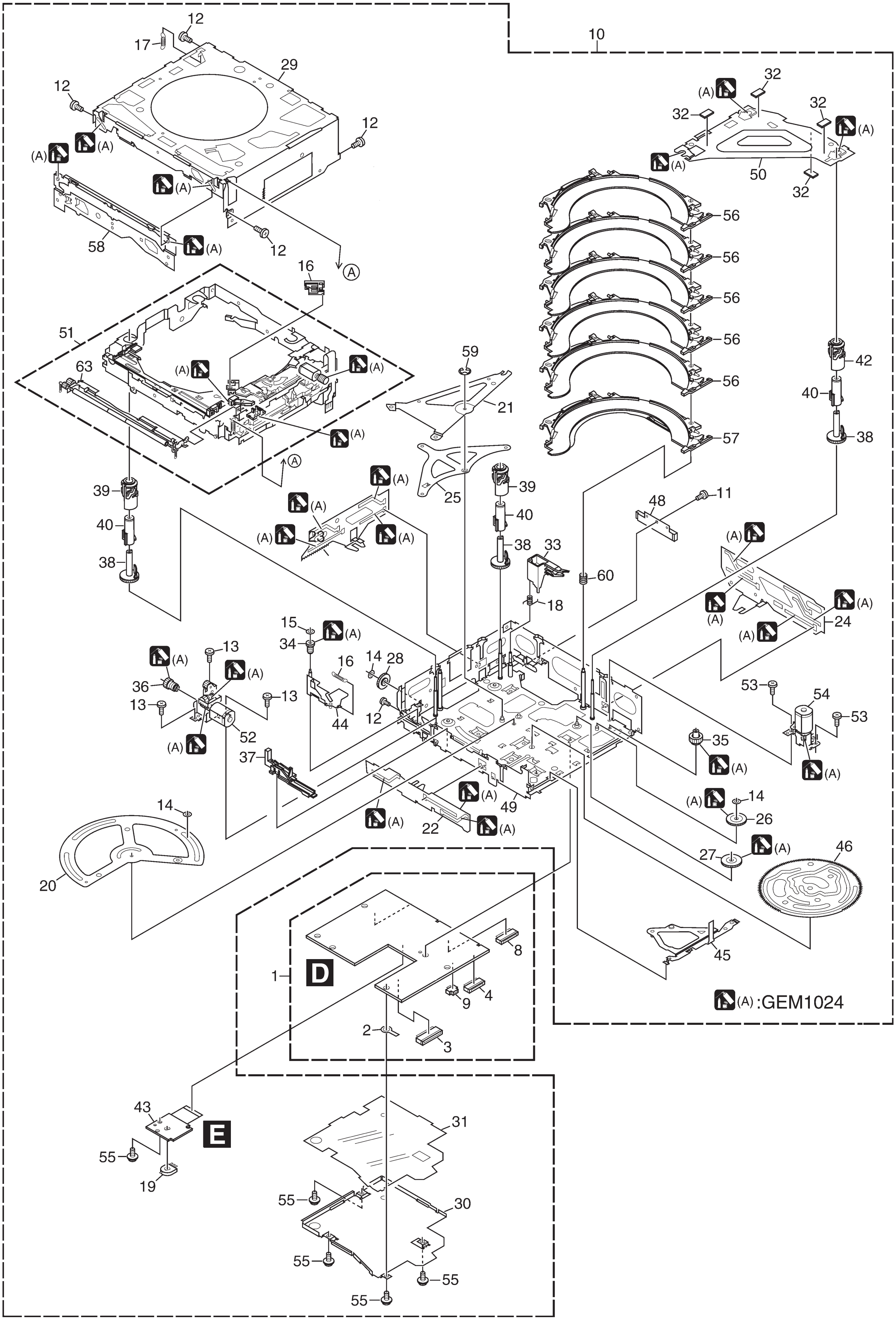
Mark	No.	Description	Part No.
	1	Screw	BMZ20P160FTC
	2	Screw	BMZ26P040FTC
	3	Screw	BSZ26P050FTC
	4	Panel	CNB3279
	5	Seal	CNN1326
	6	•••••	
	7	Screw	ASZ26P050FTC
	8	Screw	BMZ20P030FTC
	9	Spring	CBL1747
	10	Cord Assy	CDE7176
	11	Cord	CDE7809
	12	Cable	CDE8149
	13	Cord Assy	CDE8154
	14	Cushion	CNN1325
	15	Mother Unit	See Contrast table(2)
	16	Screw	BMZ26P160FTC
	17	Screw	BSZ26P080FTC
	18	Antenna Cable(CN401)	CDH1358
	19	FM/AM Tuner Unit	CWE1651
	20	Connector(CN101)	CKS4653
	21	Connector(CN102)	CKS4653
	22	Holder	CND1432
	23	Terminal(CN732)	CKF-047
	24	Connector(CN702)	CKM1332
	25	Socket(CN261)	CKM1457
	26	Connector(CN382)	CKS2104
	27	Connector(CN951)	CKS4497
	28	Connector(CN104)	CKS4799
	29	Connector(CN161)	CKS4800
	30	Connector(CN381)	CKS4817
	31	Connector(CN481)	CKS4822
	32	Connector(CN162)	CKS4823
	33	Connector(CN952)	CKS4823
	34	Connector(CN771)	CKS4824
	35	Connector(CN141)	CKS4830
	36	Connector(CN471)	CKS5062
	37	Connector(CN441)	CKS5070
	38	Connector(CN351)	CKS5075
	39	Connector(CN101)	CKS5547
	40	Holder	CND1058
	41	Holder	CND2633
	42	Holder	CND3283
	43	Holder	CND3284
	44	Holder	CND3285
	45	Insulator	CNM8453
	46	Spacer	CNM9522
	47	Heat Sink	CNR1703
	48	Heat Sink	CNR1784
	49	Drive Unit	CXC6065
	50	Screw(M2 x 6)	CBA1399
	51	Screw(M2 x 1.5)	CBA1615
	52	Screw(M2 x 2)	CBA1771
	53	Screw(M2 x 2.5)	CBA1881
	54	Spring	CZB3092
	55	Spring	CZB3093
	56	Washer	CZB5004
	57	Screw	CZB5005
	58	Shaft	CZL3010
	59	Roller	CZL3011
	60	Roller	CZL3012
	61	Gear	CZN7011
	62	Gear	CZN7012
	63	Gear	CZN7013
	64	Rack	CZN7014
	65	Holder	CZN7015
	66	Holder	CZN7042
	67	Holder	CZN7043
	68	Main PCB Unit	CZW5026
	69	Screw	BMZ26P050FTC
	70	Heat Sink	CND1228
	71	Connector(CN1)	CZK3071
	72	Connector(CN2)	CZK3075
	73	Bracket Unit	CZX5101
	74	Motor Unit	CZX5102
	75	Frame	CZN7063
	76	Screw	JFZ20P020FTC
	77	Fan Motor	CXM1262
	78	Screw	IMS20P022FTC
	79	Insulator	CNN1085
	80	Cable	CDE8151
	81	Cord Assy	CDE8155
	82	Cord Assy	CDE7449
	83	AV Selector Unit	See Contrast table(2)
	84	Connector(CN2101)	CKM1389
	85	Connector(CN2301)	CKS4978
	86	Connector(CN2401)	CKS4983
	87	Connector(CN2001)	CKS5049
	88	Holder	CND3286
	89	DVD Mechanism Module(Service)(MG4)	CXX2152
	90	Door Unit	CXC6154
	91	Holder	CND3282
	92	Screw	BMZ30P040FTC
	93	Holder	CND3281
*	94	Plate	CZN7065
	95	IC(IC241)	PAL007B
	96	Transistor (Q821)	2SB1708
	97	Transistor (Q1)	2SB1185
	98	Cable	CDE8150
	99	Cable	CDE8152
	100	Chassis	CNA2898
	101	Screw	BSZ26P050FTC
*	102	Chassis Unit	CZX5171
*	103	Washer	CZB5015
*	104	Cushion	CZN7087
*	105	Cushion	CZN7088
	106	Transistor (Q831)	2SD2396

(2) CONTRAST TABLE

AVH-P6800DVD/UC, AVH-P6800DVD/RE, AVH-P6850DVD/RD, AVH-P6850DVD/RC and AVH-P6850DVD/RI are constructed the same except for the following:

Mark	No.	Description	AVH-P6800DVD /UC	AVH-P6800DVD /RE	AVH-P6850DVD /RD	AVH-P6850DVD /RC	AVH-P6850DVD /RI
	15	Mother Unit	CWN1675	CWN1679	CWN1678	CWN1677	CWN1676
	83	AV Selector Unit	CWN1685	CWN1681	CWN1681	CWN1681	CWN1681

2.4 DVD MECHANISM MODULE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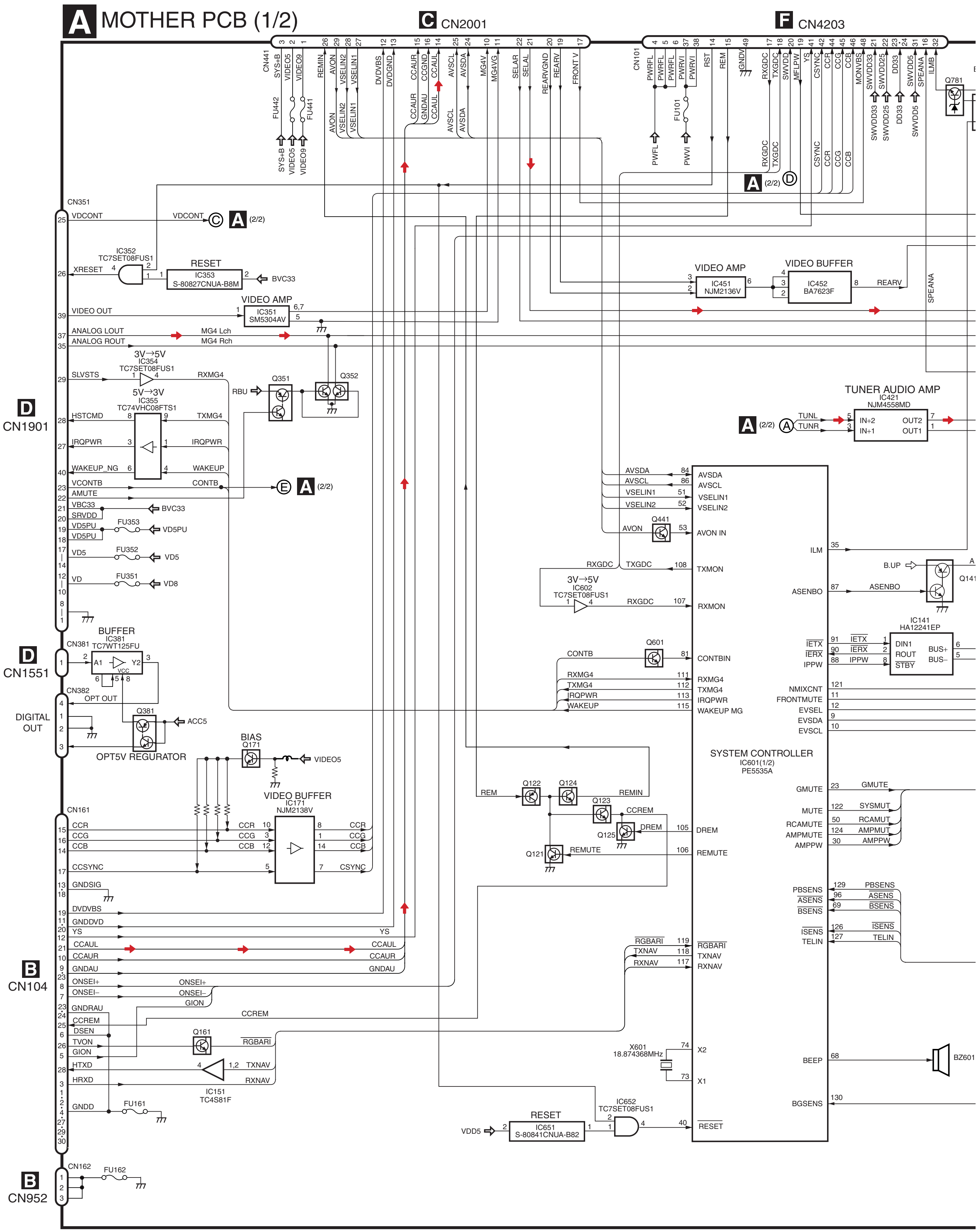
DVD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	DVD Core Unit	CWX3333
	2	Terminal(CN1902)	CKF1064
	3	Connector(CN1901)	CKS5054
	4	Connector(CN1201)	CKS4840
	5	•••••	
	6	•••••	
	7	•••••	
	8	Connector(CN1101)	CKS4842
	9	Connector(CN1551)	CKS4817
	10	Mechanism Unit(Service)	CXX2155
	11	Screw	BMZ20P025FTC
	12	Screw(M2 x 2.5)	CBA1623
	13	Screw(M2 x 2.5)	CBA1823
	14	Washer	CBF1064
	15	Washer	CBF1094
	16	Spring	CBH2720
	17	Spring	CBH2731
	18	Spring	CBH2732
	19	Variable Resistor	CCW1029
*	20	Gear	CND1924
*	21	Arm	CND1926
	22	Stair	CND1930
	23	Stair	CND1931
	24	Stair	CND1932
*	25	Arm	CND1933
*	26	Gear	CND1936
*	27	Gear	CND1937
	28	Gear	CND1939
	29	Case	CND3076
	30	Plate	CND3105
	31	Sheet	CNM9680
	32	Sheet	CNM9746
	33	Arm	CNV7850
	34	Gear	CNV8944
	35	Gear	CNV7854
	36	Gear	CNV8945
	37	Holder	CNV7861
	38	Cam	CNV7866
	39	Cam	CNV8778
	40	Cam	CNV7868
	41	Arm	CNV7869
	42	Cam	CNV8779
	43	PCB Assy	CWX2986
*	44	Lever Unit	CXC2392
*	45	Lever Unit	CXC2393
*	46	Cam Gear Unit	CXC2435
	47	•••••	
	48	PCB Assy	CXC3142
*	49	Chassis Unit	CXC6900
	50	Holder Unit	CXC2418
	51	Stage Assy(Service)	CXX2133
	52	ELV Motor Assy(M2)	CXC5910
	53	Screw	JFZ20P020FTC
	54	Cam Motor Assy(M1)	CXC5908
	55	Screw	IMS26P025FTC
	56	Tray Assy	CXC6726
	57	Lower Tray Assy	CXC6787
	58	Shutter Assy	CXC5126
	59	Washer	YE15FTC
	60	Spring	CBH2950
	61	•••••	
	62	•••••	
	63	Load Arm Assy	CXC6681

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM



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F CN4203
CN441
SYS+B
VIDEO5
VIDEO9
FU442
FU441
REMIN
AVON
VSELIN2
VSELIN1
DVDVBS
DVDGND
CCAUR
CCGND
CCAUL
GNDAU
AVSCL
AVSDA
MG4V
MG4VG
SELAR
SELAL
REARVGND
REARV
FRONT V
CN101
PWRFL
PWRVI
FU101
RST
REM
GNDV
RXGDC
TXGDC
SWVDD
MFLPW
YS
CSYNC
CCR
CCG
CCB
MONVBS
SWVDD33
SWVDD25
DD33
SWVDD5
SPEANA
ILMB
Q781
A (2/2) D
CN351
VDCONT
VDCONT C A (2/2)
IC352 TC7SET08FUS1
XRESET
RESET
IC353 S-80827CNUA-B8M
BVC33
VIDEO AMP
IC351 SM5304AV
VIDEO OUT
ANALOG LOUT
ANALOG ROUT
MG4 Lch
MG4 Rch
3V→5V
IC354 TC7SET08FUS1
SLVSTS
RXMG4
5V→3V
IC355 TC74VHC08FTS1
HSTCMD
TXMG4
IRQPWR
WAKEUP_NG
WAKEUP
Q351
Q352
RBU
VCONTB
CONTB
E A (2/2)
AMUTE
VBC33
SRVDD
VD5PU
FU353
VD5
FU352
VD
FU351
VD8
D CN1901
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IC451 NJM2136V
VIDEO BUFFER
IC452 BA7623F
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TUNER AUDIO AMP
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IN+1
OUT2
OUT1
AVSDA
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VSELIN2
AVON
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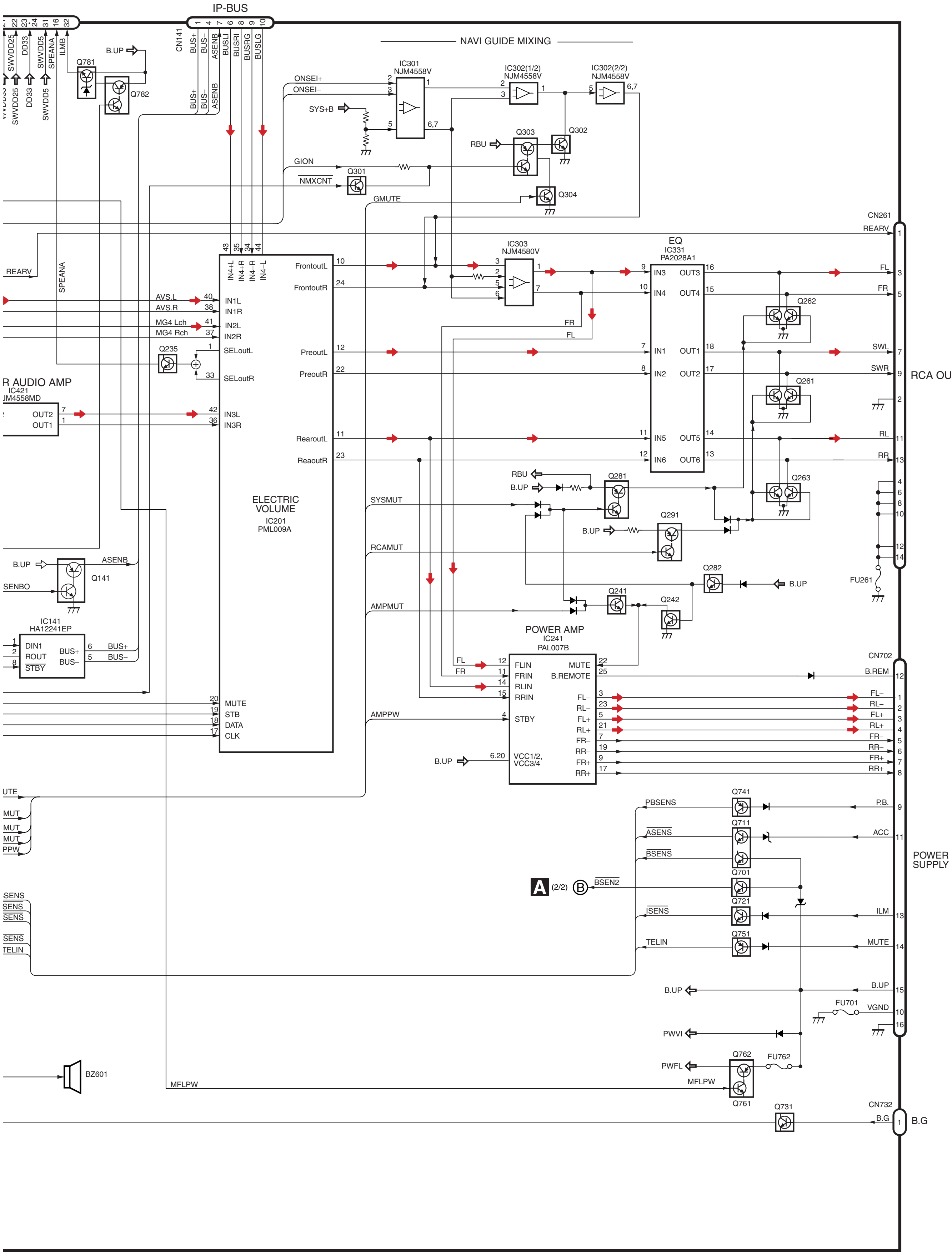
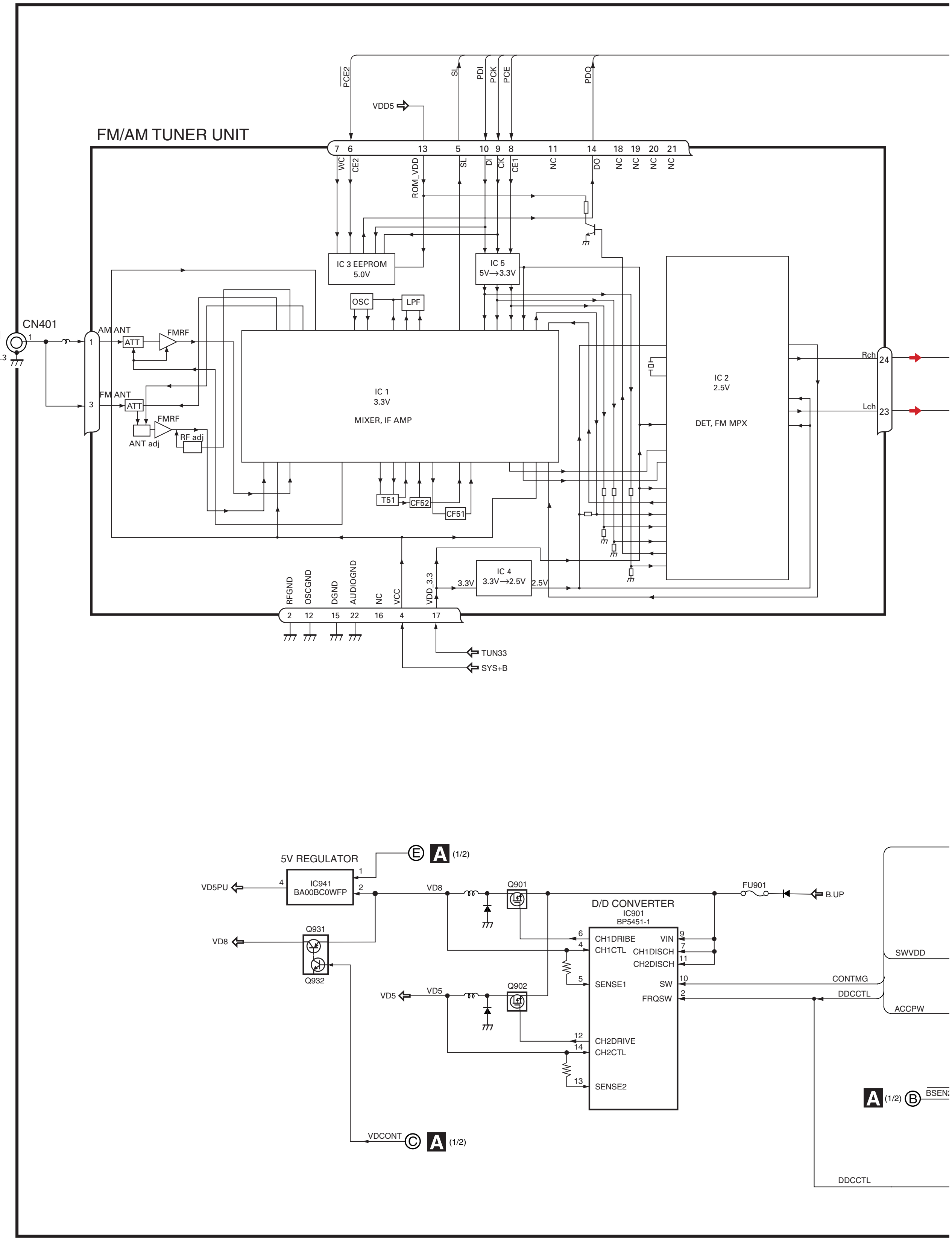
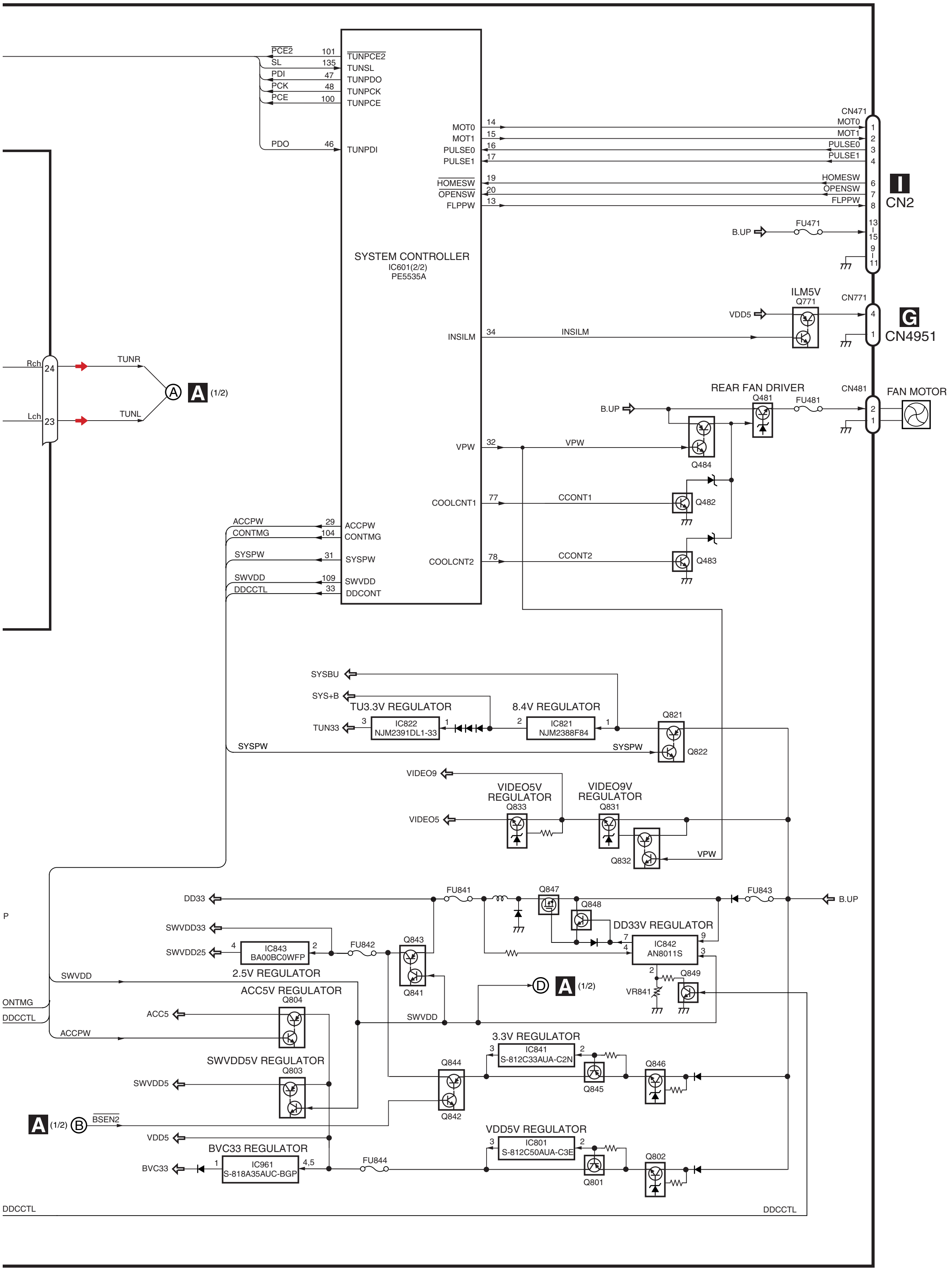
RXGDC
TXGDC
TXMON
3V→5V
IC602 TC7SET08FUS1
RXMON
B.UP
ASENBO
Q141
IC141 HA12241EP
IETX
IERX
IPPW
DIN1
ROUT
STBY
BUS+
BUS–
CONTB
Q601
CONTBIN
RXMG4
TXMG4
IRQPWR
WAKEUP
WAKEUP MG
NMIXCNT
FRONTMUTE
EVSEL
EVSDA
EVSCL
SYSTEM CONTROLLER
IC601(1/2) PE5535A
BUFFER
IC381 TC7WT125FU
CN381
D CN1551
CN382
OPT OUT
DIGITAL OUT
Q381
ACC5
OPT5V REGURATOR
BIAS
Q171
VIDEO5
VIDEO BUFFER
IC171 NJM2138V
CN161
CCR
CCG
CCB
CCSYNC
CSYNC
GNDSIG
REM
Q122
Q124
REMIN
Q123
CCREM
Q125
DREM
Q121
REMUTE
GMUTE
MUTE
SYSMUT
RCAMUTE
RCAMUT
AMPMUTE
AMPMUT
AMPPW
PBSENS
ASENS
BSENS
ISENS
TELIN
DVDVBS
GNDDVD
YS
CCAUL
CCAUR
GNDAU
B CN104
ONSEI+
ONSEI–
GION
GNDRAU
CCREM
DSEN
TVON
HTXD
HRXD
GNDD
Q161
RGBARI
TXNAV
RXNAV
IC151 TC4S81F
FU161
X601 18.874368MHz
X2
X1
BEEP
BZ601
BGSENS
RESET
IC652 TC7SET08FUS1
IC651 S-80841CNUA-B82
VDD5
CN162
FU162
B CN952


IP-BUS
CN141
BUS+
BUS–
ASENB
BUSLI
BUSRI
BUSRG
BUSLG
SWVDD25
DD33
SWVDD5
SPEANA
ILMB
B.UP
Q781
Q782
NAVI GUIDE MIXING
IC301
NJM4558V
IC302(1/2)
NJM4558V
IC302(2/2)
NJM4558V
ONSEI+
ONSEI–
SYS+B
GION
NMXCNT
Q301
GMUTE
RBU
Q303
Q302
Q304
CN261
REARV
REARV
SPEANA
IC303
NJM4580V
EQ
IC331
PA2028A1
IN3
OUT3
IN4
OUT4
IN1
OUT1
IN2
OUT2
IN5
OUT5
IN6
OUT6
FL
FR
SWL
SWR
RL
RR
Q262
Q261
Q263
RCA OUT
IN4–L
IN4+R
IN4–R
IN4–L
FrontoutL
FrontoutR
AVS.L
AVS.R
MG4 Lch
MG4 Rch
IN1L
IN1R
IN2L
IN2R
SELoutL
SELoutR
PreoutL
PreoutR
Q235
R AUDIO AMP
IC421
JM4558MD
OUT2
OUT1
IN3L
IN3R
RearoutL
RearoutR
ELECTRIC
VOLUME
IC201
PML009A
SYSMUT
RCAMUT
AMPMUT
AMPPW
RBU
B.UP
Q281
Q291
Q282
Q241
Q242
FU261
B.UP
ASENB
SENBO
Q141
IC141
HA12241EP
DIN1
ROUT
STBY
BUS+
BUS–
MUTE
STB
DATA
CLK
POWER AMP
IC241
PAL007B
FLIN
FRIN
RLIN
RRIN
STBY
VCC1/2,
VCC3/4
MUTE
B.REMOTE
FL–
RL–
FL+
RL+
FR–
RR–
FR+
RR+
CN702
B.REM
FL–
RL–
FL+
RL+
FR–
RR–
FR+
RR+
UTE
MUT
MUT
MUT
PPW
PBSENS
Q741
P.B.
ASENS
Q711
ACC
BSENS
Q701
A (2/2) B
BSEN2
ISENS
Q721
ILM
TELIN
Q751
MUTE
POWER
SUPPLY
SENS
SENS
SENS
SENS
TELIN
B.UP
B.UP
FU701
VGND
PWVI
PWFL
Q762
FU762
MFLPW
Q761
BZ601
MFLPW
Q731
CN732
B.G
B.G

A MOTHER PCB (2/2)

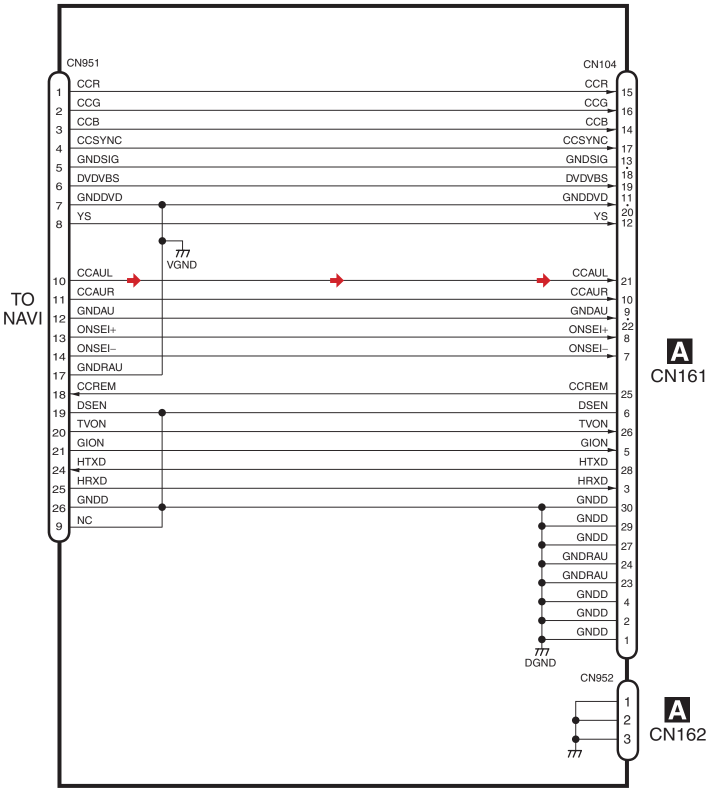


PCE2
SI
PDI
PCK
PCE
PDO
VDD5
FM/AM TUNER UNIT
7 6 13 5 10 9 8 11 14 18 19 20 21
WC
CE2
ROM_VDD
SL
DI
CK
CE1
NC
DO
NC
NC
NC
NC
IC 3 EEPROM
5.0V
IC 5
5V→3.3V
OSC
LPF
FM/AM
ANT
2.3
CN401
1
3
AM ANT
ATT
FMRF
FM ANT
ATT
FMRF
ANT adj
RF adj
IC 1
3.3V
MIXER, IF AMP
T51
CF52
CF51
IC 2
2.5V
DET, FM MPX
Rch
24
Lch
23
IC 4
3.3V→2.5V
3.3V
2.5V
RFGND
OSCGND
DGND
AUDIOGND
NC
VCC
VDD_3.3
2 12 15 22 16 4 17
TUN33
SYS+B
5V REGULATOR
E
A (1/2)
IC941
BA00BC0WFP
1
2
4
VD5PU
VD8
Q931
Q932
VD8
Q901
FU901
B.UP
D/D CONVERTER
IC901
BP5451-1
6
4
5
CH1DRIBE
CH1CTL
SENSE1
VIN
CH1DISCH
CH2DISCH
SW
FRQSW
9
7
11
10
2
SWVDD
CONTMG
DDCCTL
ACCPW
VD5
VD5
Q902
12
14
13
CH2DRIVE
CH2CTL
SENSE2
A (1/2) B
BSEN
VDCONT
C
A (1/2)
DDCCTL



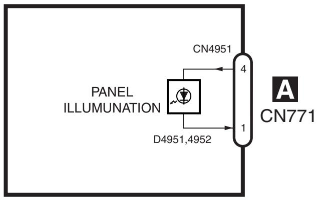
SYSTEM CONTROLLER
IC601(2/2)
PE5535A
PCE2 101 TUNPCE2
SL 135 TUNSL
PDI 47 TUNPDO
PCK 48 TUNPCK
PCE 100 TUNPCE
PDO 46 TUNPDI
MOT0 14
MOT1 15
PULSE0 16
PULSE1 17
HOMESW 19
OPENSW 20
FLPPW 13
CN471
MOT0 1
MOT1 2
PULSE0 3
PULSE1 4
HOMESW 6
OPENSW 7
FLPPW 8
13 15
9 11
I
CN2
B.UP
FU471
ILM5V
Q771
CN771
VDD5
INSILM 34
INSILM
4
1
G
CN4951
Rch 24
Lch 23
TUNR
TUNL
A
A (1/2)
REAR FAN DRIVER
Q481
FU481
CN481
FAN MOTOR
B.UP
2
1
VPW 32
VPW
Q484
COOLCNT1 77
CCONT1
Q482
COOLCNT2 78
CCONT2
Q483
ACCPW 29 ACCPW
CONTMG 104 CONTMG
SYSPW 31 SYSPW
SWVDD 109 SWVDD
DDCCTL 33 DDCONT
SYSBU
SYS+B
TU3.3V REGULATOR
8.4V REGULATOR
TUN33
3
IC822
NJM2391DL1-33
1
2
IC821
NJM2388F84
1
Q821
Q822
SYSPW
SYSPW
VIDEO9
VIDEO5V REGULATOR
Q833
VIDEO9V REGULATOR
Q831
VIDEO5
Q832
VPW
P
DD33
FU841
Q847
Q848
FU843
B.UP
SWVDD33
DD33V REGULATOR
SWVDD25
4
IC843
BA00BC0WFP
2
FU842
Q843
7
4
IC842
AN8011S
9
3
2.5V REGULATOR
SWVDD
Q841
2
Q849
VR841
D
A (1/2)
ONTMG
ACC5V REGULATOR
Q804
DDCCTL
ACC5
SWVDD
ACCPW
3.3V REGULATOR
3
IC841
S-812C33AUA-C2N
2
Q844
Q846
Q845
SWVDD5V REGULATOR
Q803
SWVDD5
Q842
A (1/2) B
BSEN2
VDD5
VDD5V REGULATOR
3
IC801
S-812C50AUA-C3E
2
BVC33 REGULATOR
Q802
BVC33
1
IC961
S-818A35AUC-BGP
4,5
FU844
Q801
DDCCTL
DDCCTL

B RGB CONNECTOR PCB

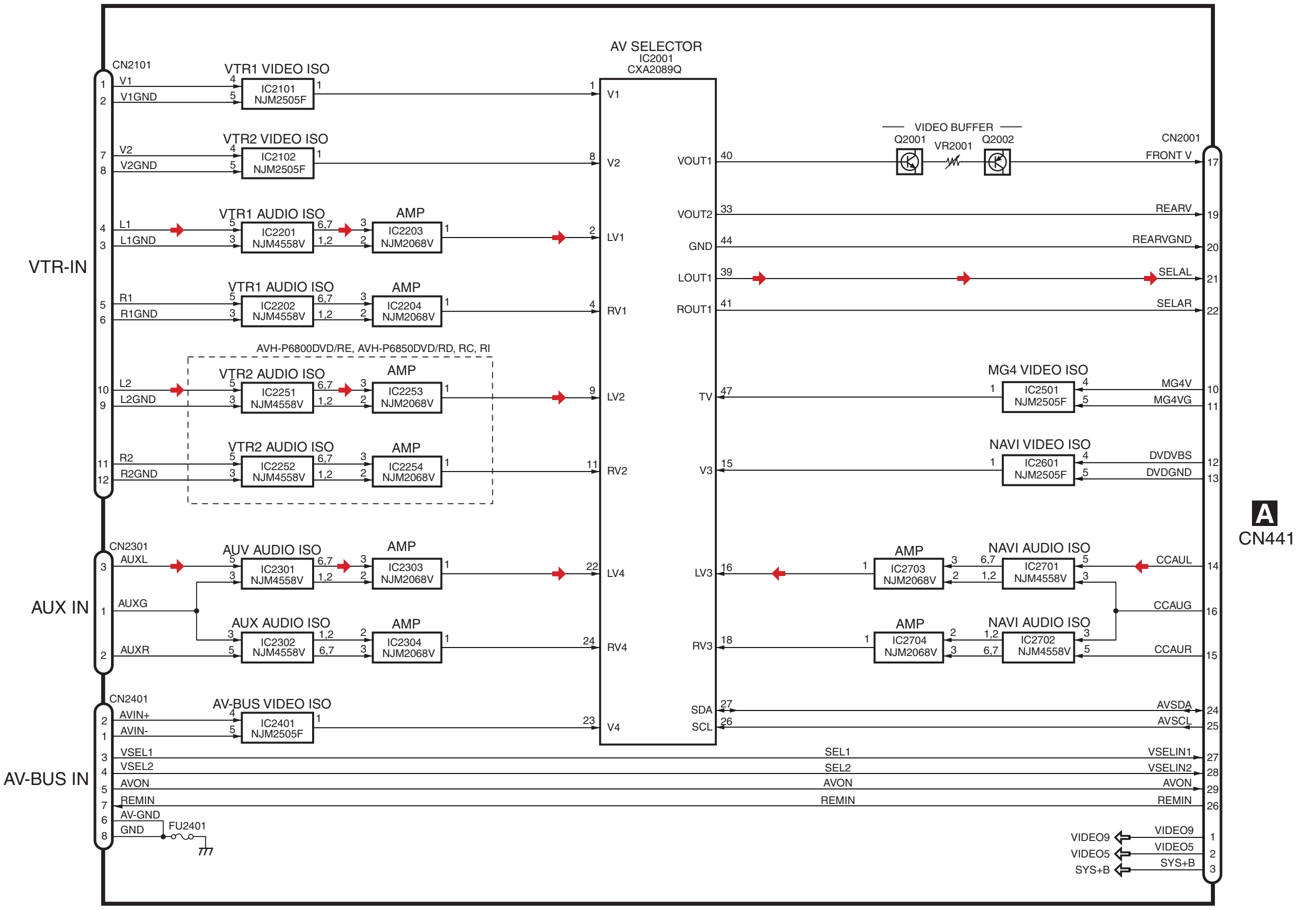

CN951
CN104
TO NAVI
1 CCR 15
2 CCG 16
3 CCB 14
4 CCSYNC 17
5 GNDSIG 13 18
6 DVDVBS 19
7 GNDDVD 11 20
8 YS 12
VGND
10 CCAUL 21
11 CCAUR 10
12 GNDAU 9 22
13 ONSEI+ 8
14 ONSEI– 7
17 GNDRAU
18 CCREM 25
19 DSEN 6
20 TVON 26
21 GION 5
24 HTXD 28
25 HRXD 3
26 GNDD 30
9 NC
GNDD 29
GNDD 27
GNDRAU 24
GNDRAU 23
GNDD 4
GNDD 2
GNDD 1
DGND
A
CN161
CN952
1
2
3
A
CN162

AV

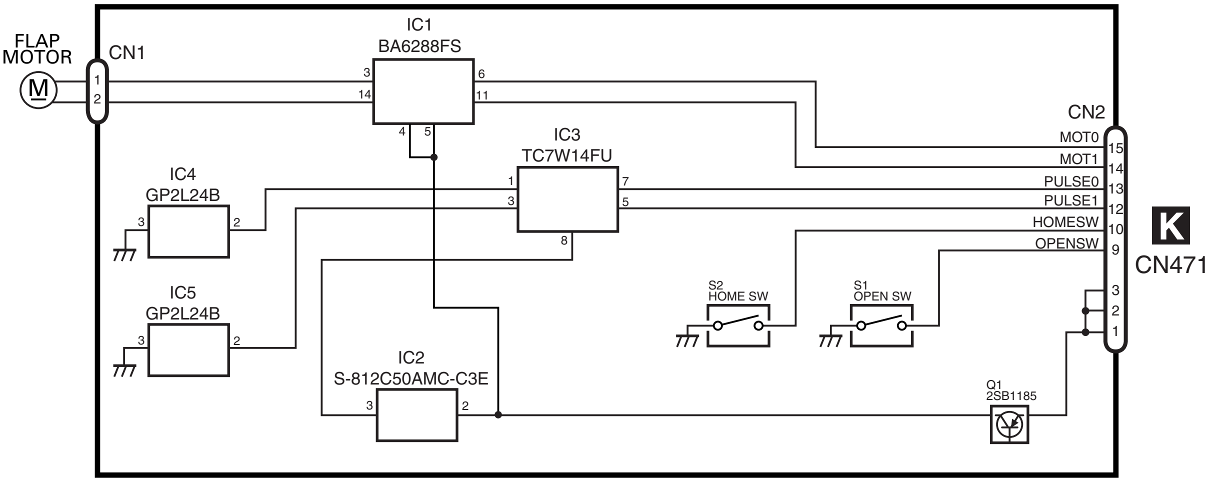
G PANEL PCB


CN4951
4
1
PANEL
ILLUMUNATION
D4951,4952
A
CN771

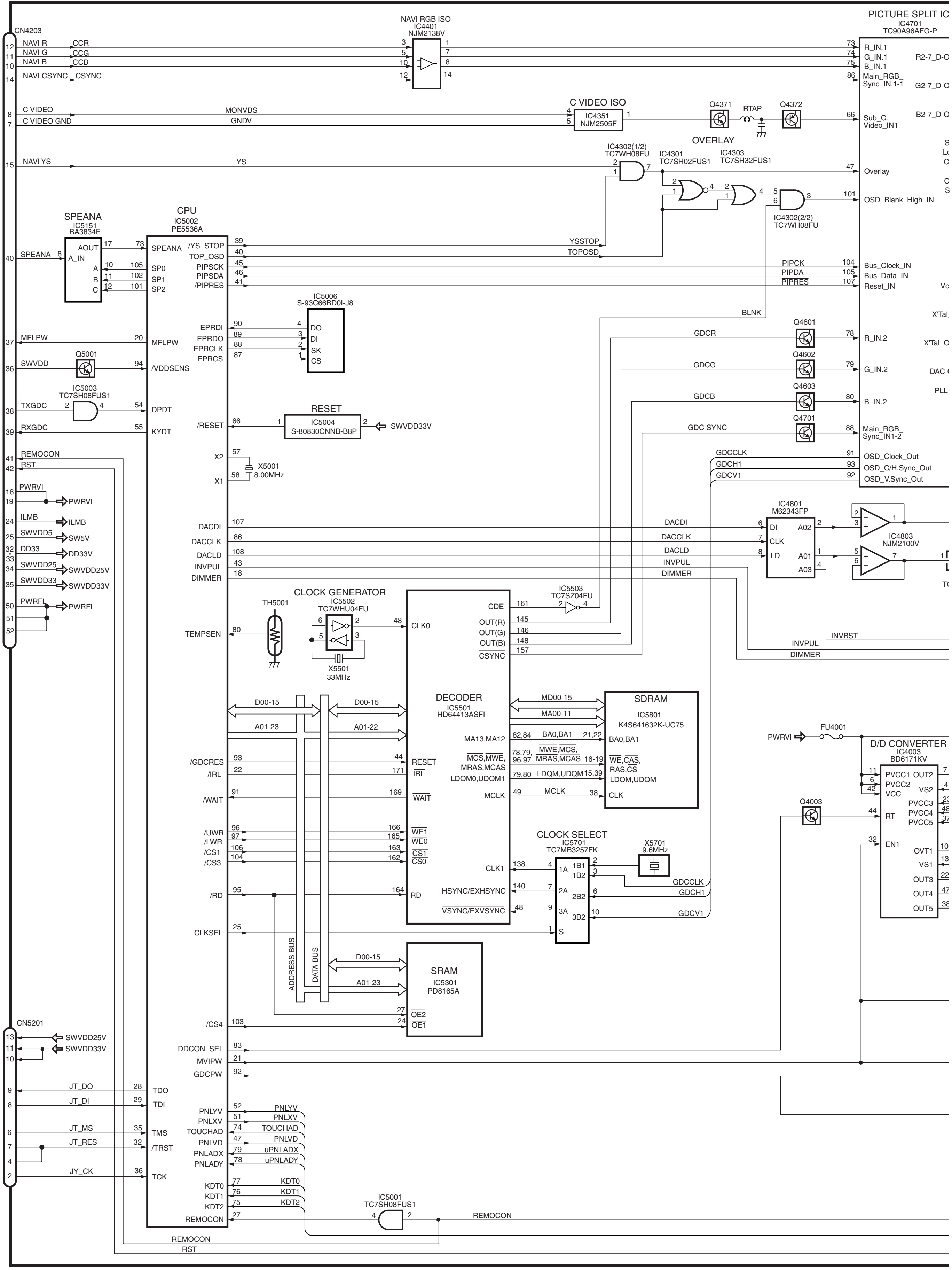
C AV SELECTOR UNIT

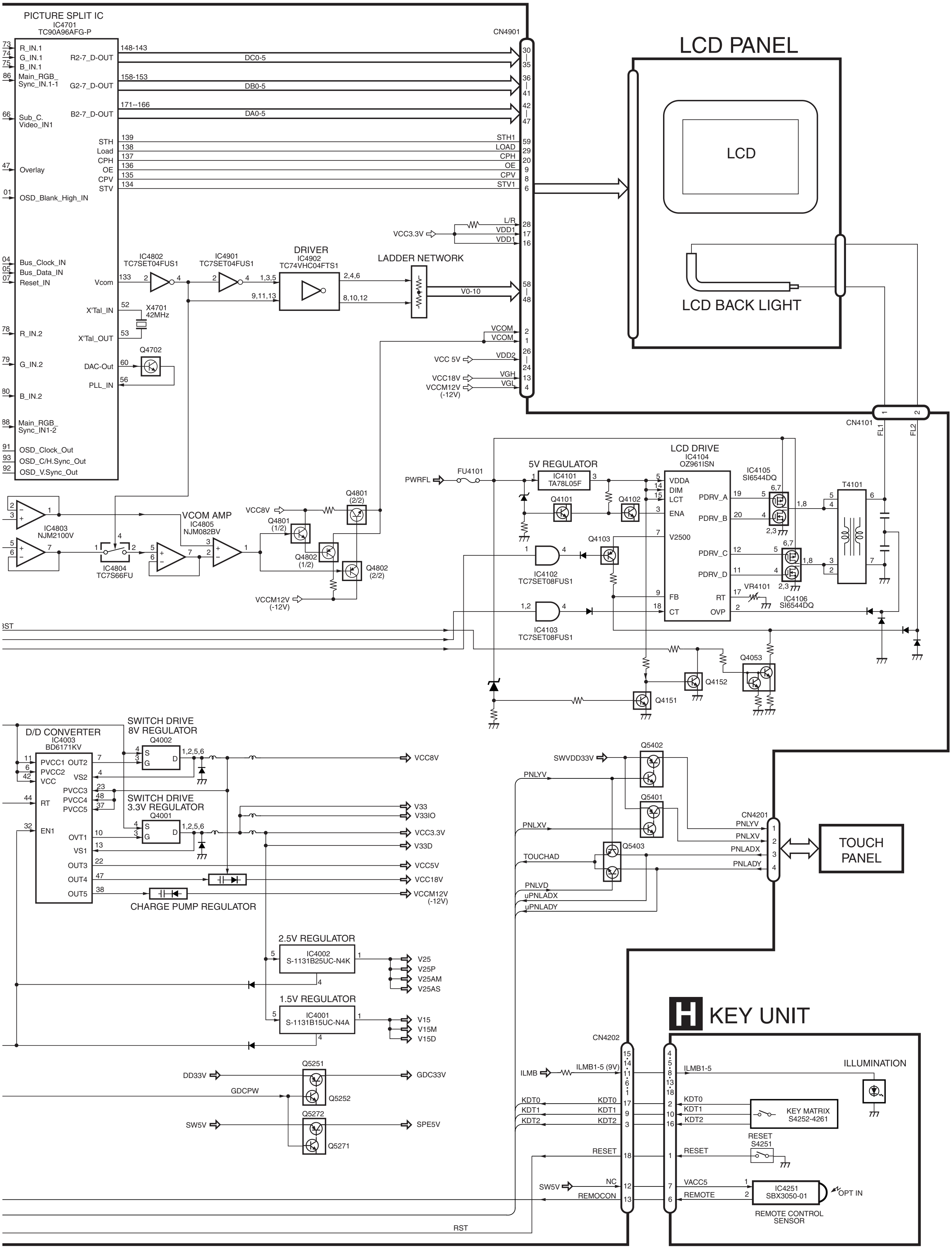

VTR-IN
AUX IN
AV-BUS IN
CN2101
V1
V1GND
V2
V2GND
L1
L1GND
R1
R1GND
L2
L2GND
R2
R2GND
VTR1 VIDEO ISO
IC2101
NJM2505F
VTR2 VIDEO ISO
IC2102
NJM2505F
VTR1 AUDIO ISO
IC2201
NJM4558V
AMP
IC2203
NJM2068V
VTR1 AUDIO ISO
IC2202
NJM4558V
AMP
IC2204
NJM2068V
AVH-P6800DVD/RE, AVH-P6850DVD/RD, RC, RI
VTR2 AUDIO ISO
IC2251
NJM4558V
AMP
IC2253
NJM2068V
VTR2 AUDIO ISO
IC2252
NJM4558V
AMP
IC2254
NJM2068V
CN2301
AUXL
AUXG
AUXR
AUV AUDIO ISO
IC2301
NJM4558V
AMP
IC2303
NJM2068V
AUX AUDIO ISO
IC2302
NJM4558V
AMP
IC2304
NJM2068V
CN2401
AVIN+
AVIN-
VSEL1
VSEL2
AVON
REMIN
AV-GND
GND
FU2401
AV-BUS VIDEO ISO
IC2401
NJM2505F
AV SELECTOR
IC2001
CXA2089Q
V1
V2
LV1
RV1
LV2
RV2
LV4
RV4
V4
VOUT1
VOUT2
GND
LOUT1
ROUT1
TV
V3
LV3
RV3
SDA
SCL
VIDEO BUFFER
Q2001
VR2001
Q2002
CN2001
FRONT V
REARV
REARVGND
SELAL
SELAR
MG4 VIDEO ISO
IC2501
NJM2505F
MG4V
MG4VG
NAVI VIDEO ISO
IC2601
NJM2505F
DVDVBS
DVDGND
AMP
IC2703
NJM2068V
NAVI AUDIO ISO
IC2701
NJM4558V
CCAUL
CCAUG
AMP
IC2704
NJM2068V
NAVI AUDIO ISO
IC2702
NJM4558V
CCAUR
AVSDA
AVSCL
SEL1
SEL2
AVON
REMIN
VSELIN1
VSELIN2
AVON
REMIN
VIDEO9
VIDEO5
SYS+B
VIDEO9
VIDEO5
SYS+B
A
CN441

I MAIN PCB UNIT

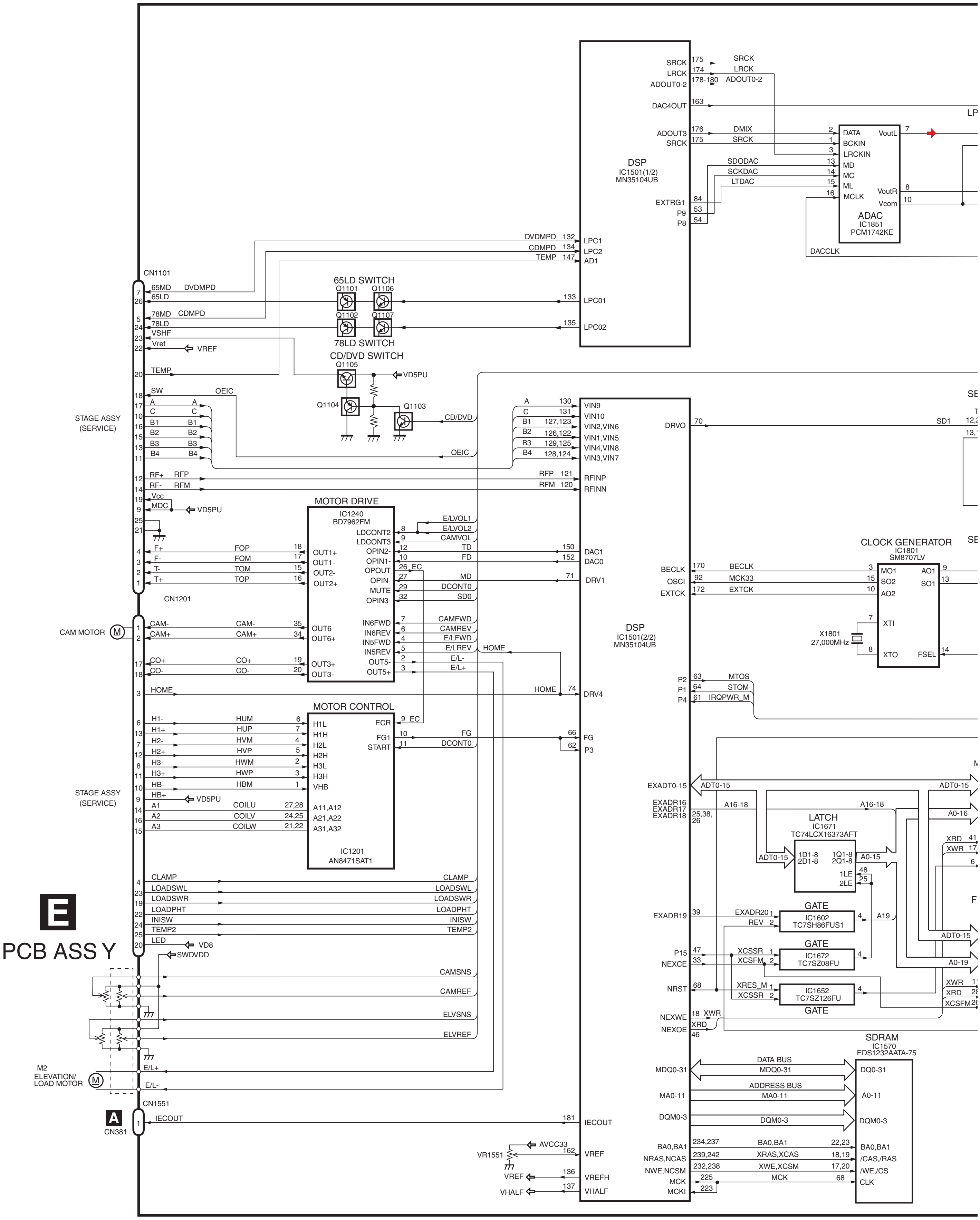

FLAP
MOTOR
M
CN1
IC1
BA6288FS
IC3
TC7W14FU
IC4
GP2L24B
IC5
GP2L24B
IC2
S-812C50AMC-C3E
S2
HOME SW
S1
OPEN SW
Q1
2SB1185
CN2
MOT0
MOT1
PULSE0
PULSE1
HOMESW
OPENSW
K
CN471

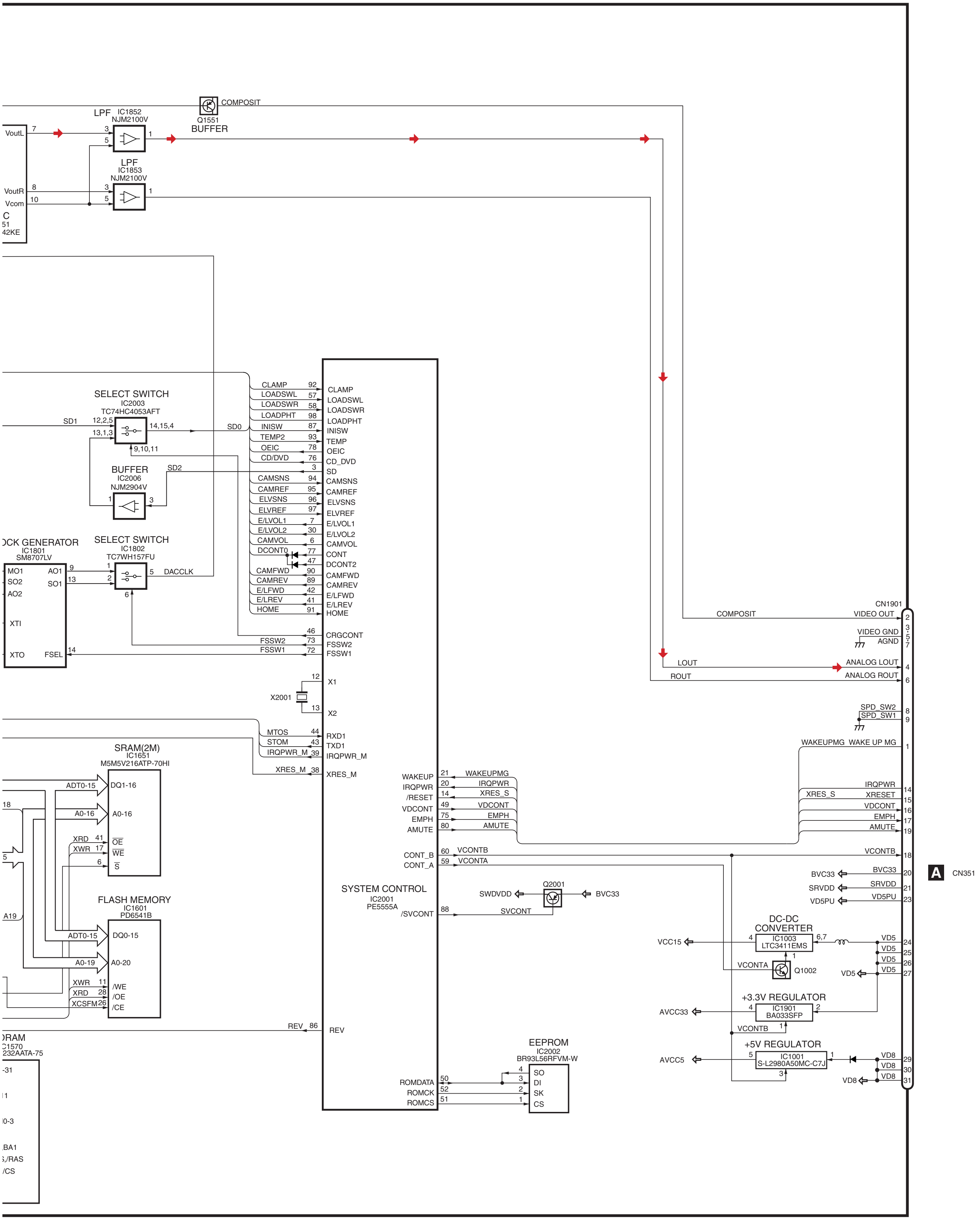
F MONITOR PCB


NAVI RGB ISO
IC4401
NJM2138V
PICTURE SPLIT IC
IC4701
TC90A96AFG-P
CN4203
NAVI R
NAVI G
NAVI B
NAVI CSYNC
CCR
CCG
CCB
CSYNC
R_IN.1
G_IN.1
B_IN.1
Main_RGB_ Sync_IN.1-1
R2-7_D-O
G2-7_D-O
B2-7_D-O
C VIDEO ISO
IC4351
NJM2505F
C VIDEO
C VIDEO GND
MONVBS
GNDV
Q4371
RTAP
Q4372
Sub_C. Video_IN1
OVERLAY
IC4302(1/2)
TC7WH08FU
IC4301
TC7SH02FUS1
IC4303
TC7SH32FUS1
NAVI YS
YS
Overlay
OSD_Blank_High_IN
IC4302(2/2)
TC7WH08FU
SPEANA
IC5151
BA3834F
AOUT
A_IN
CPU
IC5002
PE5536A
SPEANA
SP0
SP1
SP2
/YS_STOP
TOP_OSD
PIPSCK
PIPSDA
/PIPRES
YSSTOP
TOPOSD
PIPCK
PIPDA
PIPRES
Bus_Clock_IN
Bus_Data_IN
Reset_IN
IC5006
S-93C66BD0I-J8
EPRDI
EPRDO
EPRCLK
EPRCS
DO
DI
SK
CS
BLNK
A
CN101
MFLPW
SWVDD
Q5001
/VDDSENS
IC5003
TC7SH08FUS1
TXGDC
RXGDC
DPDT
KYDT
GDCR
GDCG
GDCB
GDC SYNC
Q4601
Q4602
Q4603
Q4701
R_IN.2
G_IN.2
B_IN.2
Main_RGB_ Sync_IN1-2
X'Tal_
X'Tal_O
DAC-
PLL_
RESET
IC5004
S-80830CNNB-B8P
/RESET
SWVDD33V
REMOCON
RST
X2
X1
X5001
8.00MHz
GDCCLK
GDCH1
GDCV1
OSD_Clock_Out
OSD_C/H.Sync_Out
OSD_V.Sync_Out
PWRVI
ILMB
SWVDD5
SW5V
DD33
DD33V
SWVDD25
SWVDD25V
SWVDD33
SWVDD33V
PWRFL
DACDI
DACCLK
DACLD
INVPUL
DIMMER
IC4801
M62343FP
IC4803
NJM2100V
CLOCK GENERATOR
IC5502
TC7WHU04FU
TH5001
TEMPSEN
X5501
33MHz
CLK0
CDE
OUT(R)
OUT(G)
OUT(B)
CSYNC
IC5503
TC7SZ04FU
INVBST
DECODER
IC5501
HD64413ASFI
SDRAM
IC5801
K4S641632K-UC75
D00-15
A01-23
A01-22
MD00-15
MA00-11
MA13,MA12
BA0,BA1
MCS,MWE, MRAS,MCAS
LDQM0,UDQM1
LDQM,UDQM
MCLK
WE,CAS, RAS,CS
CLK
/GDCRES
/IRL
/WAIT
RESET
IRL
WAIT
/UWR
/LWR
/CS1
/CS3
WE1
WE0
CS1
CS0
/RD
RD
CLKSEL
CLK1
HSYNC/EXHSYNC
VSYNC/EXVSYNC
CLOCK SELECT
IC5701
TC7MB3257FK
X5701
9.6MHz
PWRVI
FU4001
D/D CONVERTER
IC4003
BD6171KV
PVCC1
PVCC2
VCC
RT
EN1
OUT2
VS2
PVCC3
PVCC4
PVCC5
OVT1
VS1
OUT3
OUT4
OUT5
Q4003
ADDRESS BUS
DATA BUS
SRAM
IC5301
PD8165A
OE2
OE1
/CS4
CN5201
DDCON_SEL
MVIPW
GDCPW
JTAG
JT_DO
JT_DI
JT_MS
JT_RES
JY_CK
TDO
TDI
TMS
/TRST
TCK
PNLYV
PNLXV
TOUCHAD
PNLVD
PNLADX
PNLADY
uPNLADX
uPNLADY
KDT0
KDT1
KDT2
IC5001
TC7SH08FUS1
REMOCON
RST


A
B
C
D
E
F
PICTURE SPLIT IC
IC4701
TC90A96AFG-P
R_IN.1
G_IN.1
B_IN.1
Main_RGB_Sync_IN.1-1
Sub_C.Video_IN1
Overlay
OSD_Blank_High_IN
Bus_Clock_IN
Bus_Data_IN
Reset_IN
R_IN.2
G_IN.2
B_IN.2
Main_RGB_Sync_IN1-2
OSD_Clock_Out
OSD_C/H.Sync_Out
OSD_V.Sync_Out
R2-7_D-OUT
G2-7_D-OUT
B2-7_D-OUT
STH
Load
CPH
OE
CPV
STV
Vcom
X'Tal_IN
X'Tal_OUT
DAC-Out
PLL_IN
148-143
158-153
171--166
DC0-5
DB0-5
DA0-5
STH1
LOAD
CPH
OE
CPV
STV1
CN4901
L/R
VDD1
VDD1
VCC3.3V
IC4802
TC7SET04FUS1
IC4901
TC7SET04FUS1
DRIVER
IC4902
TC74VHC04FTS1
LADDER NETWORK
V0-10
X4701
42MHz
Q4702
VCOM
VCOM
VCC 5V
VDD2
VGH
VGL
VCC18V
VCCM12V (-12V)
LCD PANEL
LCD
LCD BACK LIGHT
CN4101
FL1
FL2
IC4803
NJM2100V
IC4804
TC7S66FU
VCOM AMP
IC4805
NJM082BV
VCC8V
Q4801 (1/2)
Q4801 (2/2)
Q4802 (1/2)
Q4802 (2/2)
VCCM12V (-12V)
RST
PWRFL
FU4101
5V REGULATOR
IC4101
TA78L05F
Q4101
Q4102
Q4103
IC4102
TC7SET08FUS1
IC4103
TC7SET08FUS1
LCD DRIVE
IC4104
OZ961ISN
VDDA
DIM
LCT
ENA
V2500
FB
CT
PDRV_A
PDRV_B
PDRV_C
PDRV_D
RT
OVP
IC4105
SI6544DQ
IC4106
SI6544DQ
VR4101
T4101
Q4053
Q4152
Q4151
D/D CONVERTER
IC4003
BD6171KV
PVCC1
PVCC2
VCC
RT
EN1
OUT2
VS2
PVCC3
PVCC4
PVCC5
OVT1
VS1
OUT3
OUT4
OUT5
SWITCH DRIVE
8V REGULATOR
Q4002
SWITCH DRIVE
3.3V REGULATOR
Q4001
VCC8V
V33
V33IO
VCC3.3V
V33D
VCC5V
VCC18V
VCCM12V (-12V)
CHARGE PUMP REGULATOR
2.5V REGULATOR
IC4002
S-1131B25UC-N4K
V25
V25P
V25AM
V25AS
1.5V REGULATOR
IC4001
S-1131B15UC-N4A
V15
V15M
V15D
Q5251
Q5252
Q5272
Q5271
DD33V
GDC33V
GDCPW
SW5V
SPE5V
SWVDD33V
Q5402
Q5401
Q5403
PNLYV
PNLXV
TOUCHAD
PNLVD
uPNLADX
uPNLADY
CN4201
PNLYV
PNLXV
PNLADX
PNLADY
TOUCH PANEL
CN4202
ILMB
ILMB1-5 (9V)
KDT0
KDT1
KDT2
RESET
SW5V
NC
REMOCON
RST
H KEY UNIT
ILMB1-5
ILLUMINATION
KDT0
KDT1
KDT2
KEY MATRIX
S4252-4261
RESET
S4251
RESET
VACC5
REMOTE
IC4251
SBX3050-01
OPT IN
REMOTE CONTROL SENSOR

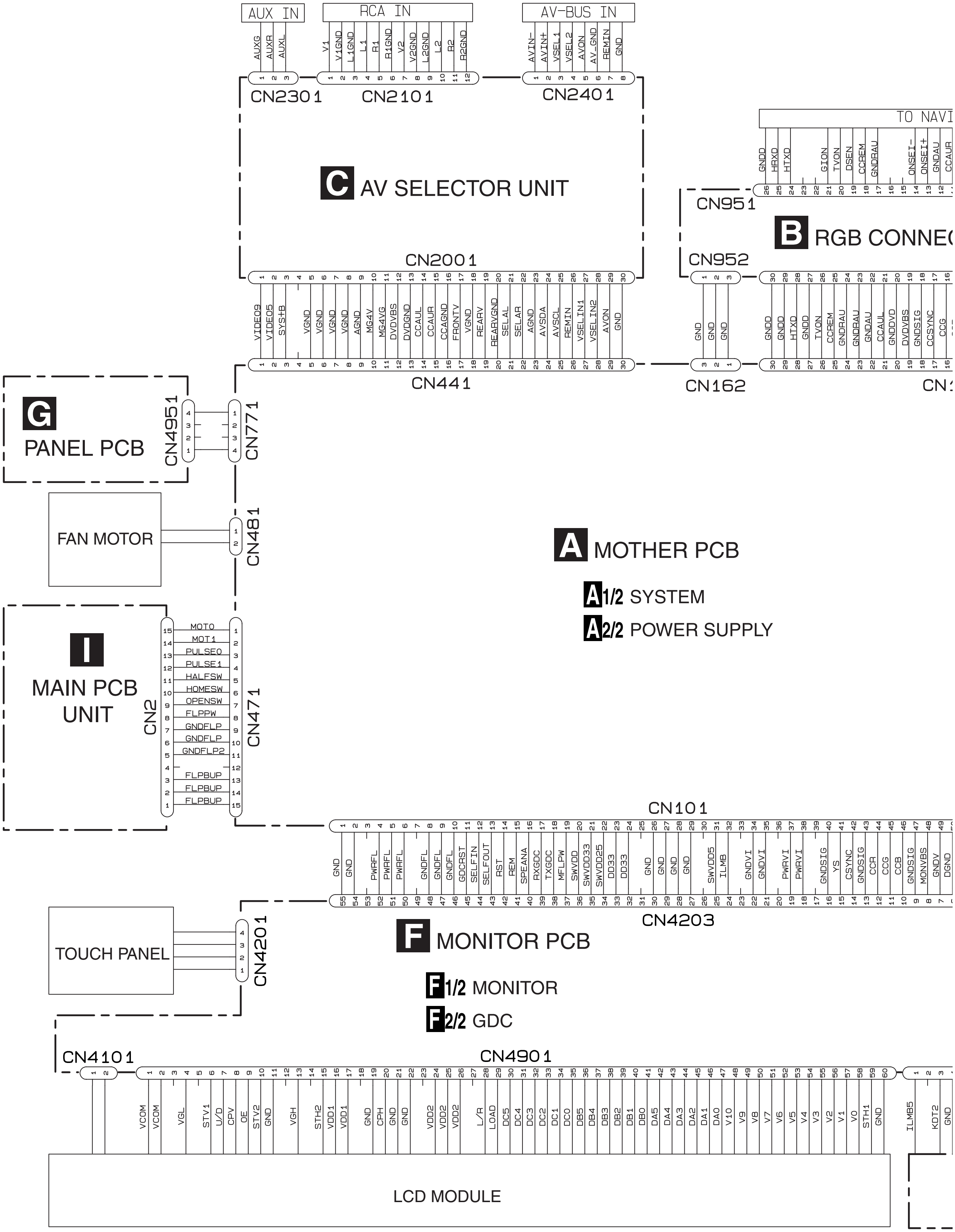
D DVD CORE UNIT

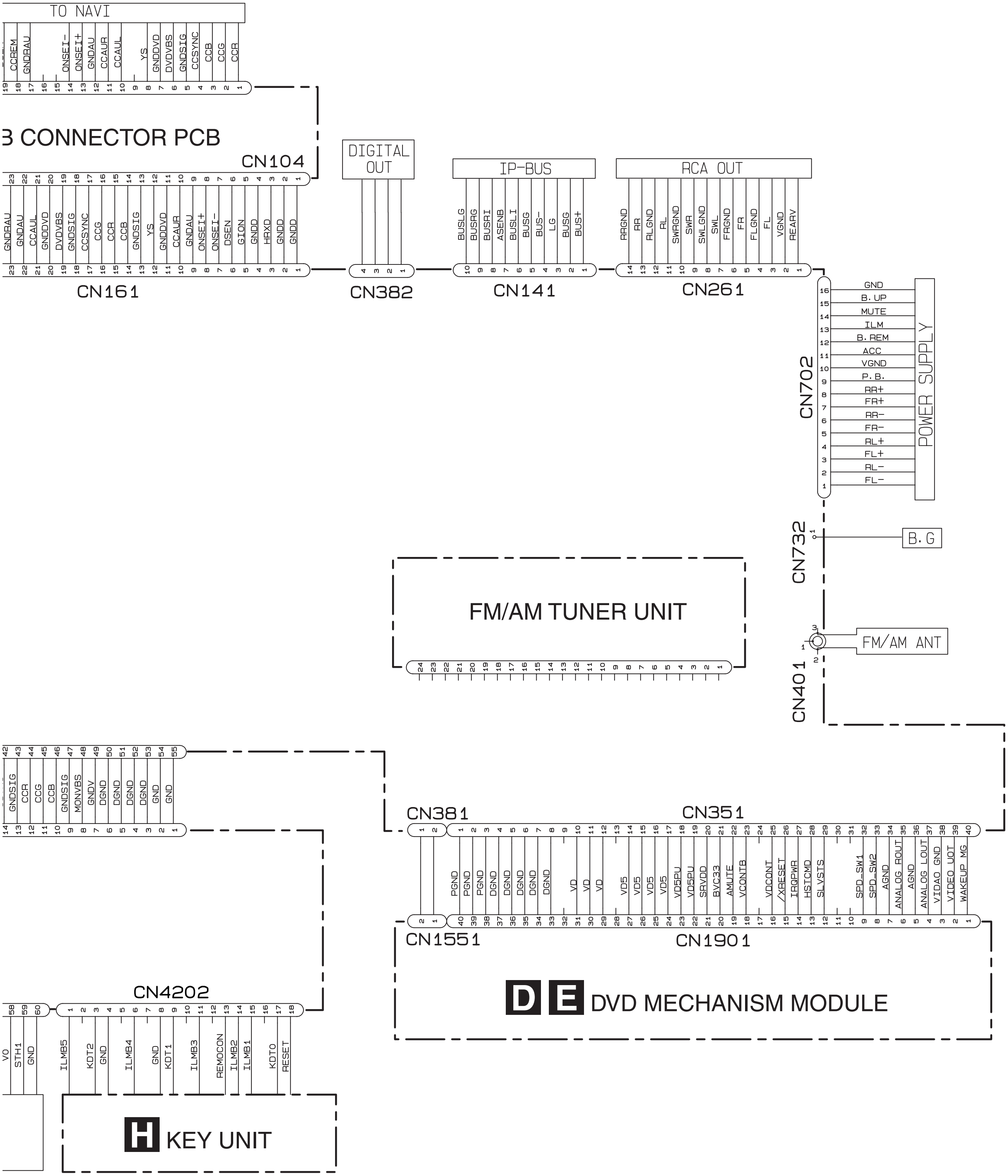

DSP
IC1501(1/2)
MN35104UB
SRCK
LRCK
ADOUT0-2
DAC4OUT
ADOUT3
EXTRG1
P9
P8
LPC1
LPC2
AD1
LPC01
LPC02
DVDMPD
CDMPD
TEMP
DMIX
SDODAC
SCKDAC
LTDAC
ADAC
IC1851
PCM1742KE
DATA
BCKIN
LRCKIN
MD
MC
ML
MCLK
VoutL
VoutR
Vcom
DACCLK
LP
CN1101
65MD
65LD
78MD
78LD
VSHF
Vref
VREF
65LD SWITCH
Q1101
Q1106
Q1102
Q1107
78LD SWITCH
CD/DVD SWITCH
Q1105
VD5PU
Q1104
Q1103
CD/DVD
OEIC
STAGE ASSY
(SERVICE)
SW
A
C
B1
B2
B3
B4
RF+
RF-
RFP
RFM
Vcc
MDC
VIN9
VIN10
VIN2,VIN6
VIN1,VIN5
VIN4,VIN8
VIN3,VIN7
RFINP
RFINN
DRVO
SD1
MOTOR DRIVE
IC1240
BD7962FM
LDCONT2
LDCONT3
OPIN2-
OPIN1-
OPOUT
OPIN-
MUTE
OPIN3-
OUT1+
OUT1-
OUT2-
OUT2+
E/LVOL1
E/LVOL2
CAMVOL
TD
FD
EC
DCONT0
SD0
F+
F-
T-
T+
FOP
FOM
TOM
TOP
CN1201
CAM MOTOR
M
CAM-
CAM+
OUT6-
OUT6+
IN6FWD
IN6REV
IN5FWD
IN5REV
OUT5-
OUT5+
CAMFWD
CAMREV
E/LFWD
E/LREV
HOME
E/L-
E/L+
CO+
CO-
OUT3+
OUT3-
DAC1
DAC0
DRV1
DSP
IC1501(2/2)
MN35104UB
DRV4
CLOCK GENERATOR
IC1801
SM8707LV
BECLK
OSCI
EXTCK
MCK33
MO1
SO2
AO2
AO1
SO1
XTI
XTO
FSEL
X1801
27,000MHz
P2
P1
P4
MTOS
STOM
IRQPWR_M
MOTOR CONTROL
H1L
H1H
H2L
H2H
H3L
H3H
VHB
ECR
FG1
START
FG
P3
IC1201
AN8471SAT1
H1-
H1+
H2-
H2+
H3-
H3+
HB-
HB+
HUM
HUP
HVM
HVP
HWM
HWP
HBM
A1
A2
A3
COILU
COILV
COILW
A11,A12
A21,A22
A31,A32
VD5PU
EXADT0-15
ADT0-15
EXADR16
EXADR17
EXADR18
A16-18
LATCH
IC1671
TC74LCX16373AFT
1D1-8
2D1-8
1Q1-8
2Q1-8
1LE
2LE
A0-15
A0-16
XRD
XWR
E
PCB ASSY
CLAMP
LOADSWL
LOADSWR
LOADPHT
INISW
TEMP2
LED
VD8
SWDVDD
EXADR19
EXADR20
REV
GATE
IC1602
TC7SH86FUS1
A19
P15
NEXCE
XCSSR
XCSFM
IC1672
TC7SZ08FU
A0-19
NRST
XRES_M
IC1652
TC7SZ126FU
XCSFM
NEXWE
NEXOE
CAMSNS
CAMREF
ELVSNS
ELVREF
M2
ELEVATION/
LOAD MOTOR
SDRAM
IC1570
EDS1232AATA-75
DATA BUS
MDQ0-31
DQ0-31
ADDRESS BUS
MA0-11
A0-11
DQM0-3
BA0,BA1
NRAS,NCAS
NWE,NCSM
MCK
MCKI
XRAS,XCAS
XWE,XCSM
/CAS,/RAS
/WE,/CS
CLK
CN1551
A
CN381
IECOUT
AVCC33
VR1551
VREF
VREFH
VHALF
181
162
136
137


LPF
IC1852
NJM2100V
Q1551
BUFFER
COMPOSIT
VoutL
VoutR
Vcom
C
51
42KE
LPF
IC1853
NJM2100V
SELECT SWITCH
IC2003
TC74HC4053AFT
SD1
12,2,5
13,1,3
14,15,4
9,10,11
SD0
BUFFER
IC2006
NJM2904V
SD2
SELECT SWITCH
IC1802
TC7WH157FU
DACCLK
OCK GENERATOR
IC1801
SM8707LV
MO1
SO2
AO2
AO1
SO1
XTI
XTO
FSEL
CLAMP
LOADSWL
LOADSWR
LOADPHT
INISW
TEMP2
OEIC
CD/DVD
SD
CAMSNS
CAMREF
ELVSNS
ELVREF
E/LVOL1
E/LVOL2
CAMVOL
DCONT0
CONT
DCONT2
CAMFWD
CAMREV
E/LFWD
E/LREV
HOME
CRGCONT
FSSW2
FSSW1
X1
X2
X2001
MTOS
STOM
RXD1
TXD1
IRQPWR_M
XRES_M
SRAM(2M)
IC1651
M5M5V216ATP-70HI
ADT0-15
DQ1-16
A0-16
XRD
XWR
OE
WE
S
FLASH MEMORY
IC1601
PD6541B
DQ0-15
A0-19
A0-20
XCSFM
/WE
/OE
/CE
A19
REV
DRAM
C1570
232AATA-75
SYSTEM CONTROL
IC2001
PE5555A
WAKEUP
IRQPWR
/RESET
VDCONT
EMPH
AMUTE
WAKEUPMG
XRES_S
CONT_B
CONT_A
VCONTB
VCONTA
/SVCONT
SVCONT
Q2001
SWDVDD
BVC33
EEPROM
IC2002
BR93L56RFVM-W
SO
DI
SK
CS
ROMDATA
ROMCK
ROMCS
CN1901
COMPOSIT
VIDEO OUT
VIDEO GND
AGND
LOUT
ANALOG LOUT
ROUT
ANALOG ROUT
SPD_SW2
SPD_SW1
WAKEUPMG WAKE UP MG
IRQPWR
XRESET
VDCONT
EMPH
AMUTE
VCONTB
BVC33
SRVDD
VD5PU
DC-DC
CONVERTER
IC1003
LTC3411EMS
VCC15
VCONTA
Q1002
VD5
+3.3V REGULATOR
IC1901
BA033SFP
AVCC33
VCONTB
+5V REGULATOR
IC1001
S-L2980A50MC-C7J
AVCC5
VD8
A
CN351

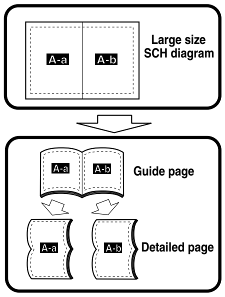
3.2 OVERALL CONNECTION DIAGRAM

Note: When ordering service parts, be sure to refer to " EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".

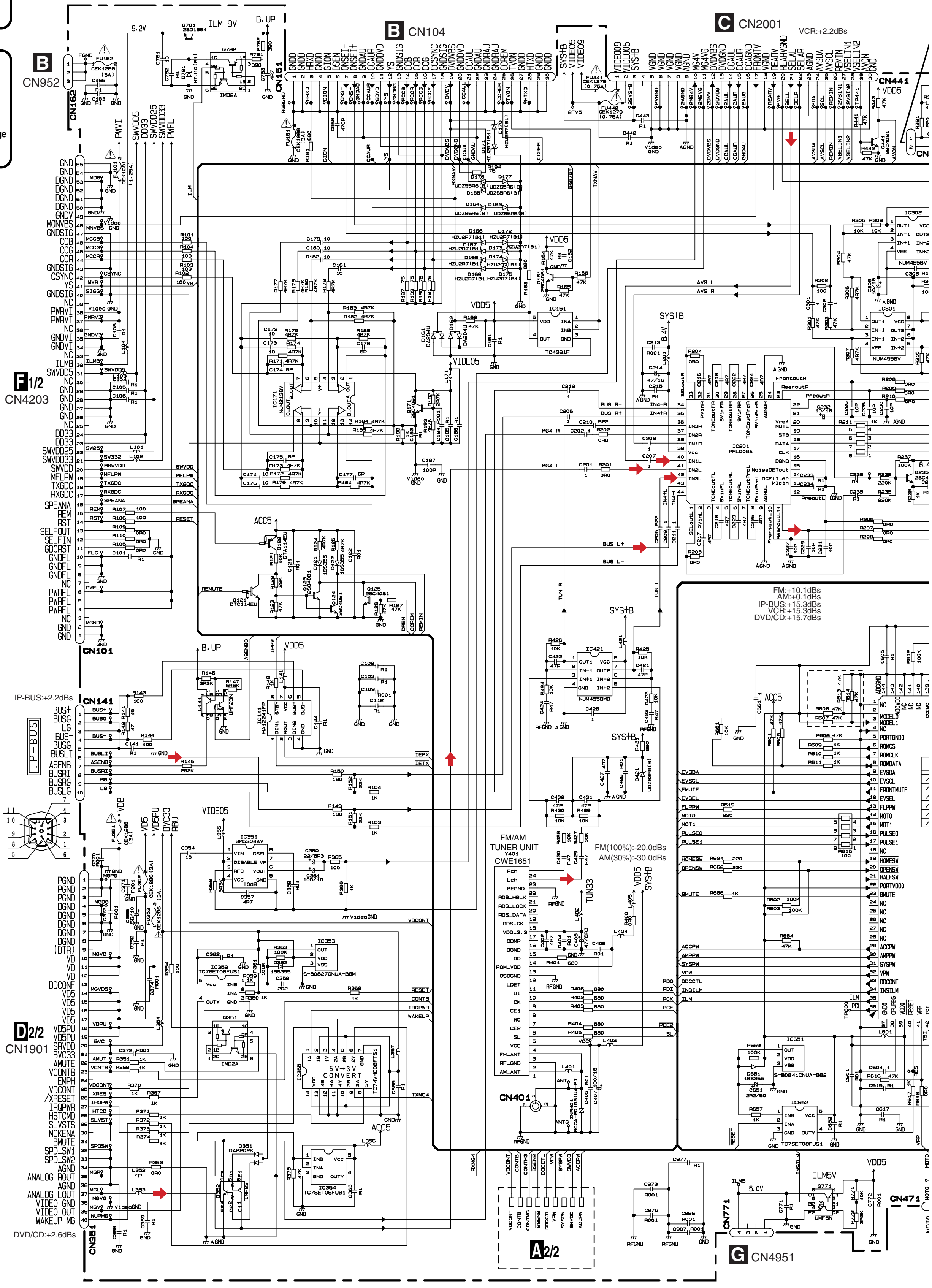

AUX IN
AUXG
AUXR
AUXL
CN2301
RCA IN
V1
V1GND
L1GND
L1
R1
R1GND
V2
V2GND
L2GND
L2
R2
R2GND
CN2101
AV-BUS IN
AVIN-
AVIN+
VSEL1
VSEL2
AVON
AV_GND
REMIN
GND
CN2401
C AV SELECTOR UNIT
CN2001
VIDEO9
VIDEO5
SYS+B
VGND
VGND
VGND
VGND
AGND
MG4V
MG4VG
DVDVBS
DVDGND
CCAUL
CCAUR
CCAGND
FRONTV
VGND
REARV
REARVGND
SELAL
SELAR
AGND
AVSDA
AVSCL
REMIN
VSELIN1
VSELIN2
AVON
GND
CN441
TO NAVI
GNDD
HRXD
HTXD
GION
TVON
DSEN
CCREM
GNDRAU
ONSEI-
ONSEI+
GNDAU
CCAUR
CN951
B RGB CONNEC
CN952
GND
GND
GND
CN162
GNDD
GNDD
HTXD
GNDD
TVON
CCREM
GNDRAU
GNDRAU
GNDAU
CCAUL
GNDDVD
DVDVBS
GNDSIG
CCSYNC
CCG
CN1
G PANEL PCB
CN4951
CN771
FAN MOTOR
CN481
A MOTHER PCB
A1/2 SYSTEM
A2/2 POWER SUPPLY
I MAIN PCB UNIT
CN2
MOTO
MOT1
PULSE0
PULSE1
HALFSW
HOMESW
OPENSW
FLPPW
GNDFLP
GNDFLP
GNDFLP2
FLPBUP
FLPBUP
FLPBUP
CN471
CN101
GND
GND
PWRFL
PWRFL
PWRFL
GNDFL
GNDFL
GNDFL
GDCRST
SELFIN
SELFOUT
RST
REM
SPEANA
RXGDC
TXGDC
MFLPW
SWVDD
SWVDD33
SWVDD25
DD33
DD33
GND
GND
GND
GND
SWVDD5
ILMB
GNDVI
GNDVI
PWRVI
PWRVI
GNDSIG
YS
CSYNC
GNDSIG
CCR
CCG
CCB
GNDSIG
MONVBS
GNDV
DGND
CN4203
F MONITOR PCB
F1/2 MONITOR
F2/2 GDC
TOUCH PANEL
CN4201
CN4101
CN4901
VCOM
VCOM
VGL
STV1
U/D
CPV
OE
STV2
GND
VGH
STH2
VDD1
VDD1
GND
CPH
GND
GND
VDD2
VDD2
VDD2
L/R
LOAD
DC5
DC4
DC3
DC2
DC1
DC0
DB5
DB4
DB3
DB2
DB1
DB0
DA5
DA4
DA3
DA2
DA1
DA0
V10
V9
V8
V7
V6
V5
V4
V3
V2
V1
V0
STH1
GND
ILMB5
KDT2
GND
LCD MODULE


TO NAVI
CCREM
GNDRAU
ONSEI-
ONSEI+
GNDAU
CCAUR
CCAUL
YS
GNDDVD
DVDVBS
GNDSIG
CCSYNC
CCB
CCG
CCR
B CONNECTOR PCB
CN104
DIGITAL OUT
IP-BUS
RCA OUT
GNDRAU
GNDAU
CCAUL
GNDDVD
DVDVBS
GNDSIG
CCSYNC
CCG
CCR
CCB
GNDSIG
YS
GNDDVD
CCAUR
GNDAU
ONSEI+
ONSEI-
DSEN
GION
GNDD
HRXD
GNDD
GNDD
BUSLG
BUSRG
BUSRI
ASENB
BUSLI
BUSG
BUS-
LG
BUSG
BUS+
RRGND
RR
RLGND
RL
SWRGND
SWR
SWLGND
SWL
FRGND
FR
FLGND
FL
VGND
REARV
CN161
CN382
CN141
CN261
GND
B. UP
MUTE
ILM
B. REM
ACC
VGND
P. B.
RR+
FR+
RR-
FR-
RL+
FL+
RL-
FL-
CN702
POWER SUPPLY
CN732
B.G
FM/AM TUNER UNIT
FM/AM ANT
CN401
GNDSIG
CCR
CCG
CCB
GNDSIG
MONVBS
GNDV
DGND
DGND
DGND
DGND
GND
GND
CN381
CN351
PGND
PGND
PGND
DGND
DGND
DGND
DGND
DGND
VD
VD
VD
VD5
VD5
VD5
VD5
VD5PU
VD5PU
SRVDD
BVC33
AMUTE
VCONTB
VDCONT
/XRESET
IRQPWR
HSTCMD
SLVSTS
SPD_SW1
SPD_SW2
AGND
ANALOG_ROUT
AGND
ANALOG_LOUT
VIDAO_GND
VIDEO_UOT
WAKEUP_MG
CN1551
CN1901
D E DVD MECHANISM MODULE
CN4202
VO
STH1
GND
ILMB5
KDT2
GND
ILMB4
GND
KDT1
ILMB3
REMOCON
ILMB2
ILMB1
KDT0
RESET
H KEY UNIT

3.3 MOTHER PCB (SYSTEM)(GUIDE PAGE)


A-a
A-b
Large size SCH diagram
Guide page
Detailed page

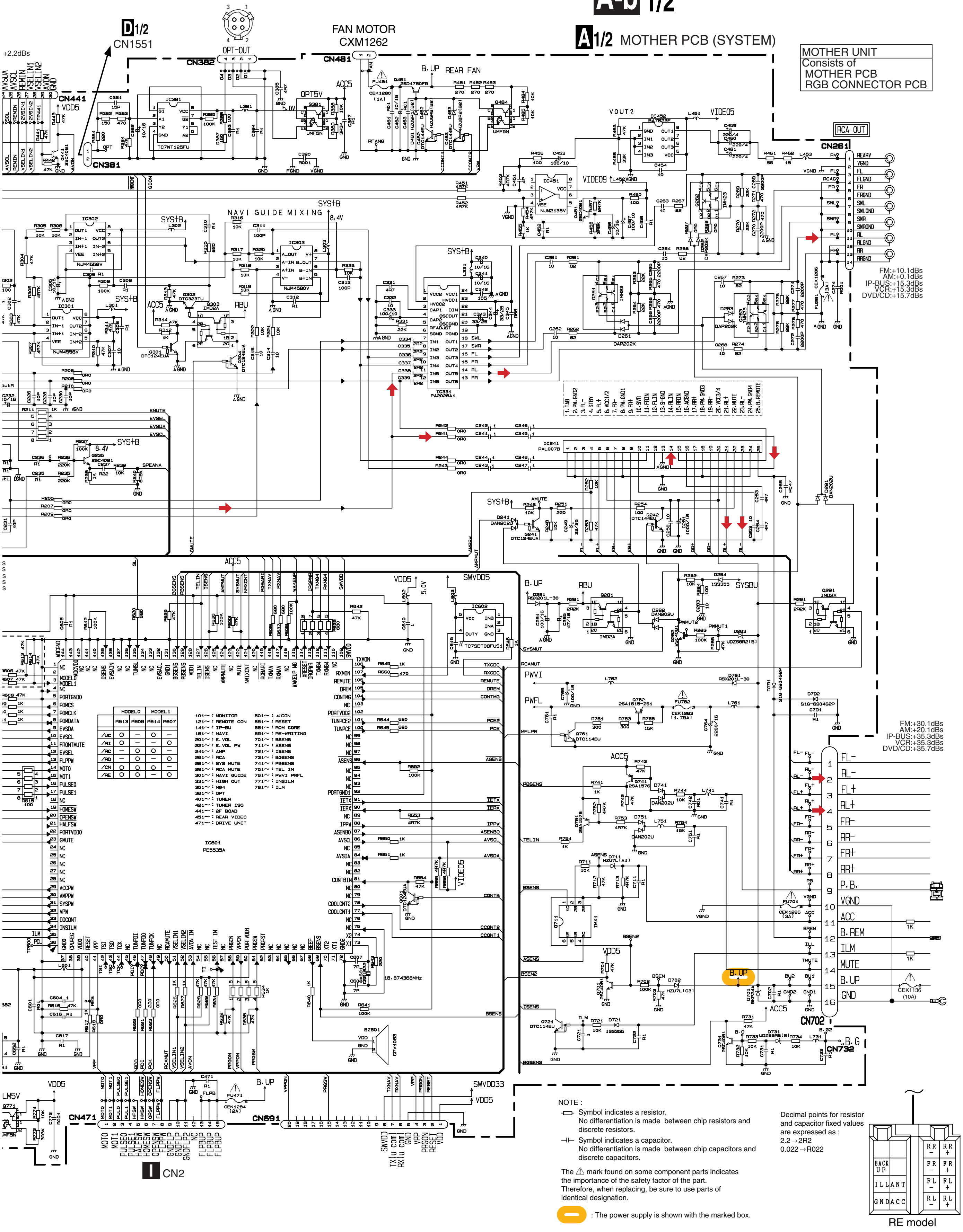
A-a 1/2


B CN952
CN162
CN161
B CN104
C CN2001
VCR:+2.2dBs
CN441
VDD5
ILM 9V
B.UP
9.2V
Q781 2SD1664
Q782
IMD2A
FU162 CEK1286 (3A)
FU161 CEK1286 (3A)
FU441 CEK1279 (0.75A)
FU442 CEK1279 (0.75A)
2FV5
SYS+B
F 1/2 CN4203
CN101
IC171 NJM2136V
IC161 TC4S81F
IC201 PML009A
IC301 NJM4558V
IC302 NJM4558V
VIDEO5
VDD5
SYS+B
ACC5
Q121 DTC114EU
Q122 DTA114EU
Q123 2SC4081
Q124 2SC4081
Q125 2SC4081
BUS R+
BUS R−
BUS L+
BUS L−
AVS L
AVS R
MG4 R
MG4 L
FM:+10.1dBs
AM:+0.1dBs
IP-BUS:+15.3dBs
VCR:+15.3dBs
DVD/CD:+15.7dBs
IP-BUS:+2.2dBs
CN141
IP-BUS
IC141 HA12241FP
Q141 UMF23N
IC421 NJM4558MD
FM/AM TUNER UNIT Y401 CWE1651
FM(100%):-20.0dBs
AM(30%):-30.0dBs
CN401
TUN R
TUN L
TUN33
D 2/2 CN1901
IC351 SM5304AV
IC352 TC7SET08FUS1
IC353 S-80827CNUA-B8M
IC355 TC74VHC08FTS1
IC354 TC7SET08FUS1
Q351 IMD2A
D351 DAP202K
5V→3V CONVERT
CN351
DVD/CD:+2.6dBs
A 2/2
IC651 S-80841CNUA-B82
IC652 TC7SET08FUS1
D651 1SS355
CN771
G CN4951
ILM5V
Q771 UMF5N
CN471
VDD5
ILM5 5.0V

A 1/2

A-b 1/2

A 1/2 MOTHER PCB (SYSTEM)


MOTHER UNIT
Consists of
MOTHER PCB
RGB CONNECTOR PCB
D 1/2 CN1551
OPT-OUT
FAN MOTOR CXM1262
CN382
CN481
CN441
CN381
IC381 TC7WT125FU
REAR FAN
B.UP
FU481 CEK1280 (1A)
Q481 2SD1760F5
VOUT2
IC452 BA7623F
VIDEO5
RCA OUT
CN261
REARV
VGND
FL
FLGND
FR
FRGND
SWL
SWLGND
SWR
SWRGND
RL
RLGND
RR
RRGND
IC451 NJM2136V
VIDEO9
NAVI GUIDE MIXING
SYS+B
IC302 NJM4558V
IC301 NJM4558V
IC303 NJM4580V
IC331 PA2028A1
IC241 PAL007B
1.TAB
2.PW.GND2
3.FL-
4.STBY
5.FL+
6.VCC1/2
7.FR-
8.PW.GND1
9.FR+
10.SVR
11.FRIN
12.FLIN
13.S-GND
14.RLIN
15.RRIN
16.ACGND
17.RR-
18.PW.GND3
19.RR+
20.VCC3/4
21.RL+
22.MUTE
23.RL-
24.PW.GND4
25.B.REMOTE
FM:+10.1dBs
AM:+0.1dBs
IP-BUS:+15.3dBs
VCR:+15.3dBs
DVD/CD:+15.7dBs
+2.2dBs
IC601 PE5535A
IC502 TC7SET08FUS1
101~ : MONITOR
121~ : REMOTE CON
141~ : IP-BU
161~ : NAVI
201~ : E.VOL
221~ : E.VOL PW
241~ : AMP
261~ : RCA
281~ : SYS MUTE
291~ : RCA MUTE
301~ : NAVI GUIDE
341~ : HIGH OUT
351~ : MG4
381~ : OPT
401~ : TUNER
421~ : TUNER ISO
441~ : 2F BOAD
451~ : REAR VIDEO
471~ : DRIVE UNIT
601~ : μCON
651~ : RESET
661~ : ROM CORE
691~ : RE-WRITING
701~ : BSENS
711~ : ASENS
721~ : ISENS
731~ : BGSENS
751~ : PBSENS
751~ : TEL IN
761~ : PWVI PWFL
771~ : INSILM
781~ : ILM
MODEL0 MODEL1
R613 R606 R614 R607
/UC /RI /RC /RD /CN /RE
18.874368MHz
BZ601
CN471
CN691
I CN2
SWVDD33
VDD5
FU471 CEK1284 (2A)
FU762 CEK1283 (1.75A)
FU701 CEK1286 (3A)
CEK1136 (10A)
FM:+30.1dBs
AM:+20.1dBs
IP-BUS:+35.3dBs
VCR:+35.3dBs
DVD/CD:+35.7dBs
CN702
FL-
RL-
FL+
RL+
FR-
RR-
FR+
RR+
P.B.
VGND
ACC
B.REM
ILM
MUTE
B.UP
GND
CN732
B.G
BACK UP
ILLANT
GNDACC
RR- RR+
FR- FR+
FL- FL+
RL- RL+
RE model

NOTE :

▭ Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.

⊣⊢ Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

▭ : The power supply is shown with the marked box.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2 → 2R2
0.022 → R022

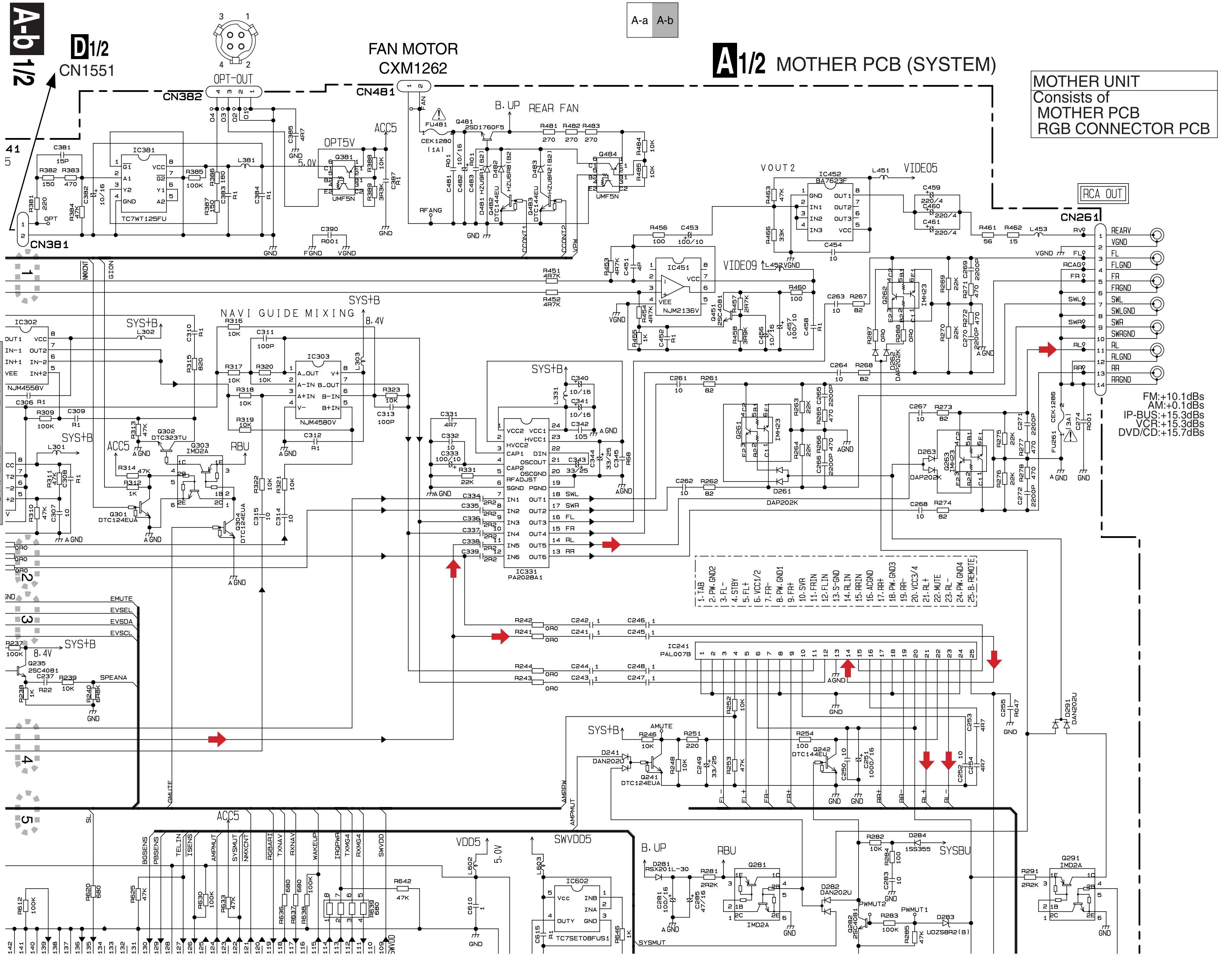
A 1/2

A 1/2 MOTHER PCB (SYSTEM)

MOTHER UNIT
Consists of
MOTHER PCB
RGB CONNECTOR PCB

A-b 1/2

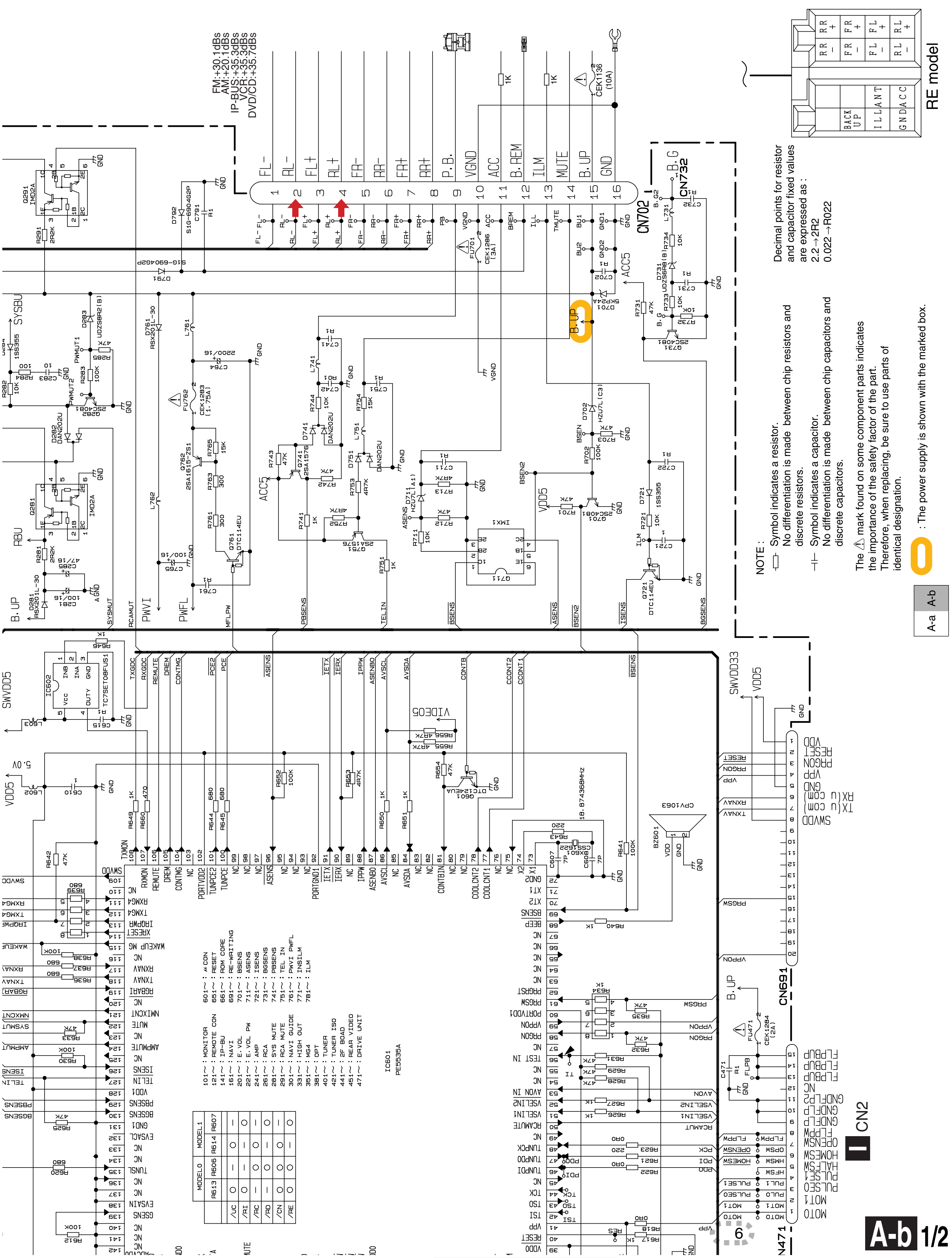
A-a A-b



D 1/2 CN1551
CN381
CN382
OPT-OUT
FAN MOTOR
CXM1262
CN481
IC381
TC7WT125FU
OPT5V
Q381 UMF5N
ACC5
FU481 CEK1280 (1A)
Q481 2SD1760F5
B. UP
REAR FAN
Q482 DTC144EU
Q483 DTC144EU
D481 HZU9R1(B2)
D482 HZU6R8(B2)
D483 HZU8R2(B2)
Q484 UMF5N
R481 270
R482 270
R483 270
RFANG
CCONT1
CCONT2
VPW
VOUT2
IC452 BA7623F
VIDEO5
VIDEO9
IC451 NJM2136V
Q451 2SC4081
RCA OUT
CN261
REARV
VGND
FL
FLGND
FR
FRGND
SWL
SWLGND
SWR
SWRGND
RL
RLGND
RR
RRGND
Q261 IMH23
Q262 IMH23
Q263 IMH23
D261 DAP202K
D262 DAP202K
D263 DAP202K
FU261 CEK1286 (3A)
NAVI GUIDE MIXING
SYS+B
8.4V
IC302 NJM4558V
IC303 NJM4580V
Q301 DTC124EUA
Q302 DTC323TU
Q303 IMD2A
Q304 DTC124EUA
RBU
IC331 PA2028A1
IC241 PAL007B
AMUTE
Q241 DTC124EUA
Q242 DTC144EU
D241 DAN202U
D291 DAN202U
Q235 2SC4081
SPEANA
EMUTE
EVSEL
EVSDA
EVSCL
NMXCNT
GION
GMUTE
AMPPW
AMPMUT
SWVDD5
IC602 TC7SET08FUS1
VDD5
5.0V
B. UP
D281 RSX201L-30
Q281 IMD2A
D282 DAN202U
Q282 2SC4081
PWMUT1
PWMUT2
D283 UDZS8R2(B)
D284 1SS355
SYSBU
Q291 IMD2A
SYSMUT
BGSENS
PBSENS
TELIN
ISENS
AMPMUT
SYSMUT
NMXCNT
RGBARI
TXNAV
RXNAV
WAKEUP
IRQPWR
TXMG4
RXMG4
SWVDD
SL
GND
AGND

1.TAB
2.PW.GND2
3.FL-
4.STBY
5.FL+
6.VCC1/2
7.FR-
8.PW.GND1
9.FR+
10.SVR
11.FRIN
12.FLIN
13.S-GND
14.RLIN
15.RRIN
16.ACGND
17.RR+
18.PW.GND3
19.RR-
20.VCC3/4
21.RL+
22.MUTE
23.RL-
24.PW.GND4
25.B.REMOTE

FM:+10.1dBs
AM:+0.1dBs
IP-BUS:+15.3dBs
VCR:+15.3dBs
DVD/CD:+15.7dBs


FM:+30.1dBs
AM:+20.1dBs
IP-BUS:+35.3dBs
VCR:+35.3dBs
DVD/CD:+35.7dBs
CN702
CN732
CN691
CN471
CN2
IC601
PE5535A
IC602
TC7SET08FUS1
BZ601
CPV1063
18.87436MHz
FL- RL- FL+ RL+ FR- RR- FR+ RR+ P.B. VGND ACC B.REM ILM MUTE B.UP GND
BACK UP
ILLANT
GNDACC
RR + RR −
FR + FR −
FL + FL −
RL + RL −
RE model
B.UP
SYSBU
RBU
SWVDD5
VDD5
5.0V
SWVDD33
VIDEO5
ACC5
B.G
PWVI
PWFL
101~ : MONITOR
121~ : REMOTE CON
141~ : IP-BU
161~ : NAVI
201~ : E.VOL
221~ : E.VOL PW
241~ : AMP
261~ : RCA
281~ : SYS MUTE
291~ : RCA MUTE
301~ : NAVI GUIDE
331~ : HIGH OUT
351~ : MG4
381~ : OPT
401~ : TUNER
421~ : TUNER ISO
441~ : 2F BOAD
451~ : REAR VIDEO
471~ : DRIVE UNIT
601~ : μCON
651~ : RESET
661~ : ROM CORE
691~ : RE-WRITING
701~ : BSENS
711~ : ASENS
721~ : ISENS
731~ : BGSENS
741~ : PBSENS
751~ : TEL IN
761~ : PWVI PWFL
771~ : INSILM
781~ : ILM

	MODEL0		MODEL1	
	R613	R606	R614	R607
/UC	○	—	○	—
/RI	○	—	—	○
/RC	—	○	○	—
/RD	—	○	—	○
/CN	○	○	○	—
/RE	○	○	—	○

Decimal points for resistor and capacitor fixed values are expressed as :
2.2 → 2R2
0.022 → R022

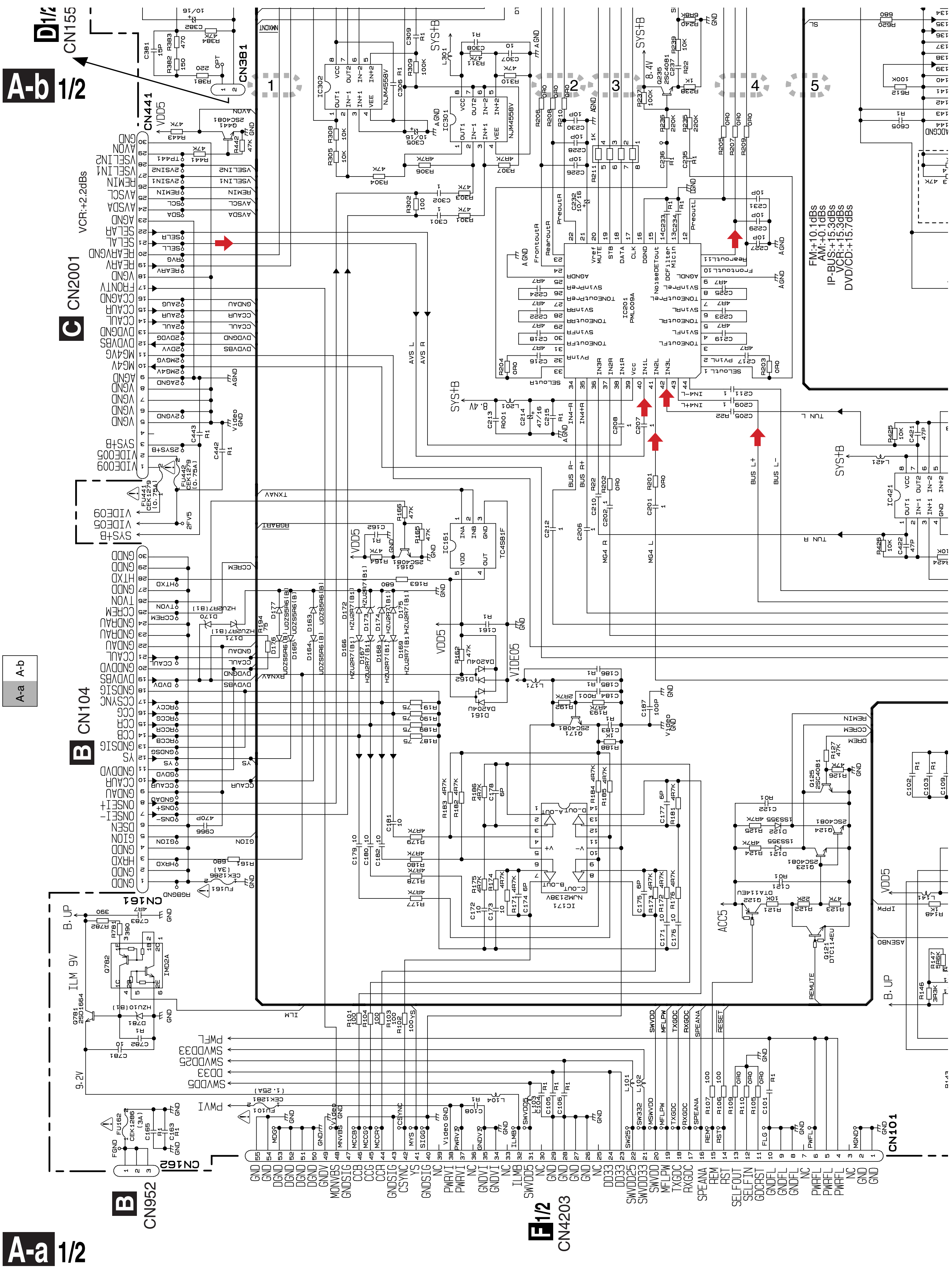
NOTE :
—▭— Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
—||— Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.

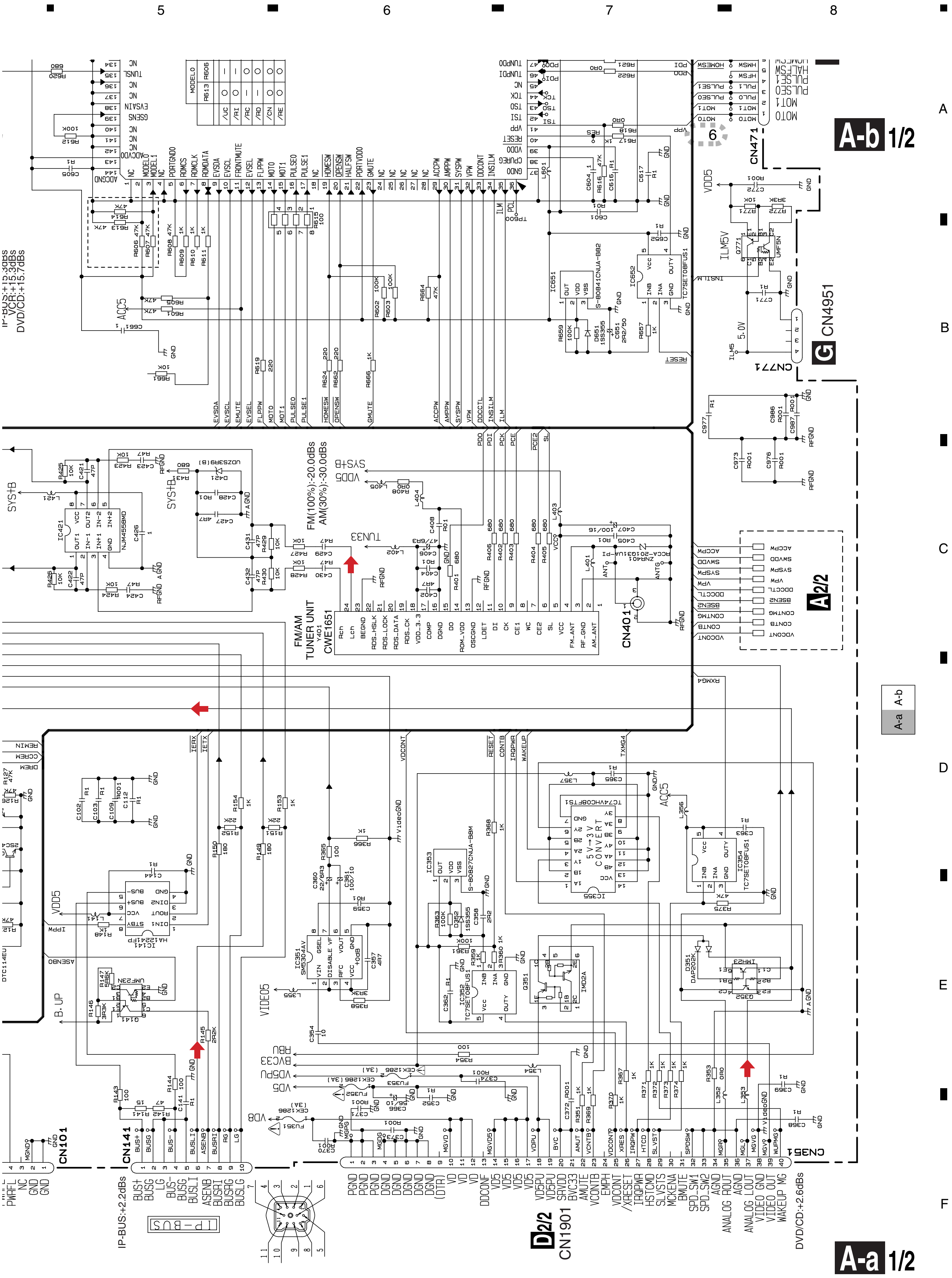
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

▢ : The power supply is shown with the marked box.

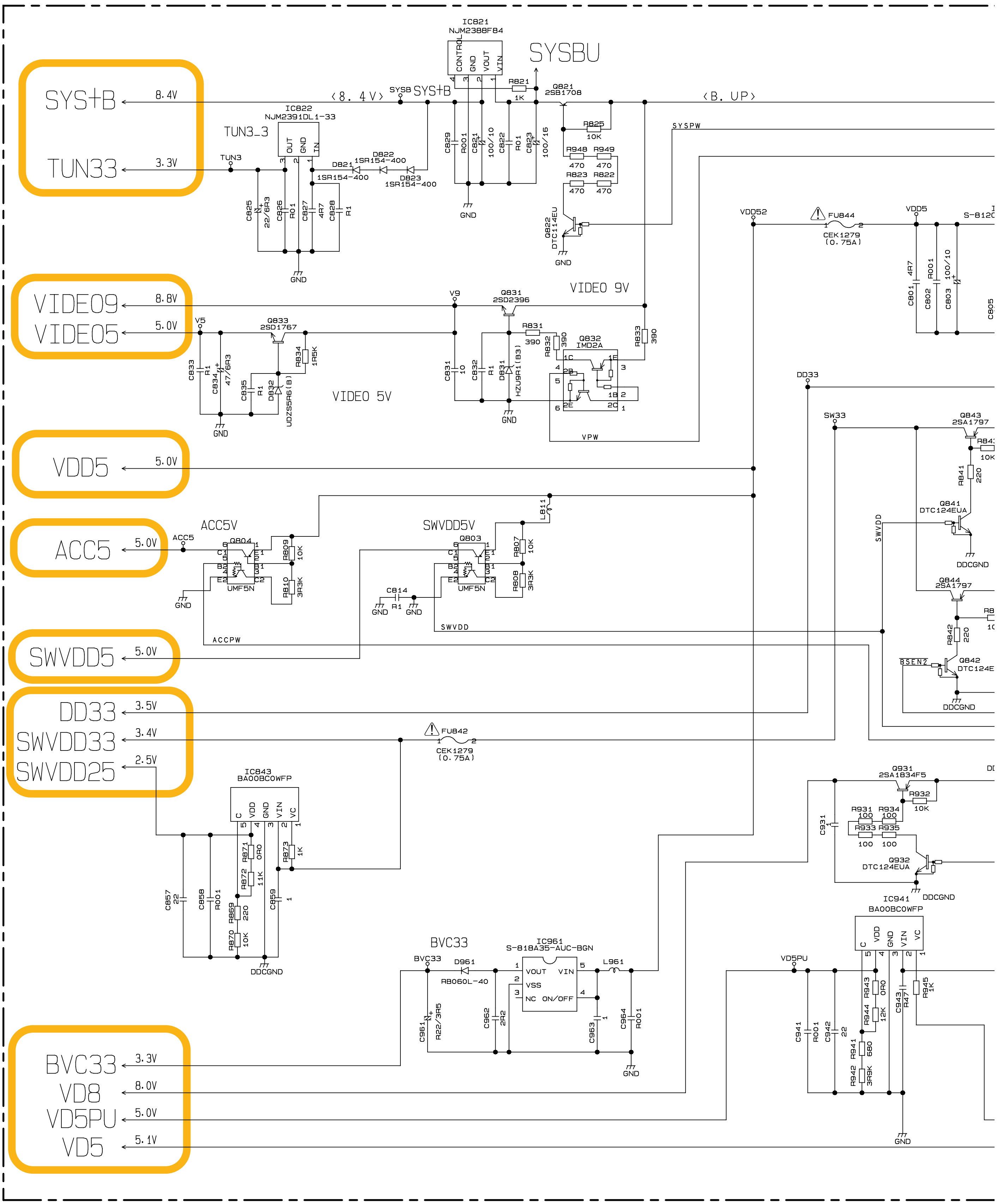
A-a A-b

A-b 1/2


A-b 1/2
D 1/2
CN155
CN441
CN381
VDD5
C CN2001
VCR:+2.2dBs
B CN104
CN161
B CN952
CN162
F 1/2 CN4203
CN101
A-a 1/2
IC201 PML009A
IC301 NJM4558V
IC302 NJM4558V
IC161 TC4S81F
IC171 NJM2138V
IC421
SYS+B
VIDEO5
ILM 9V
B. UP
ACC5
REMUTE
FM:+10.1dBs
AM:+0.1dBs
IP-BUS:+15.3dBs
VCR:+15.3dBs
DVD/CD:+15.7dBs
AVS L
AVS R
BUS R−
BUS R+
BUS L+
BUS L−
TUN L
TUN R
MG4 R
MG4 L
1
2
3
4
5
A
B
C
D
E
F

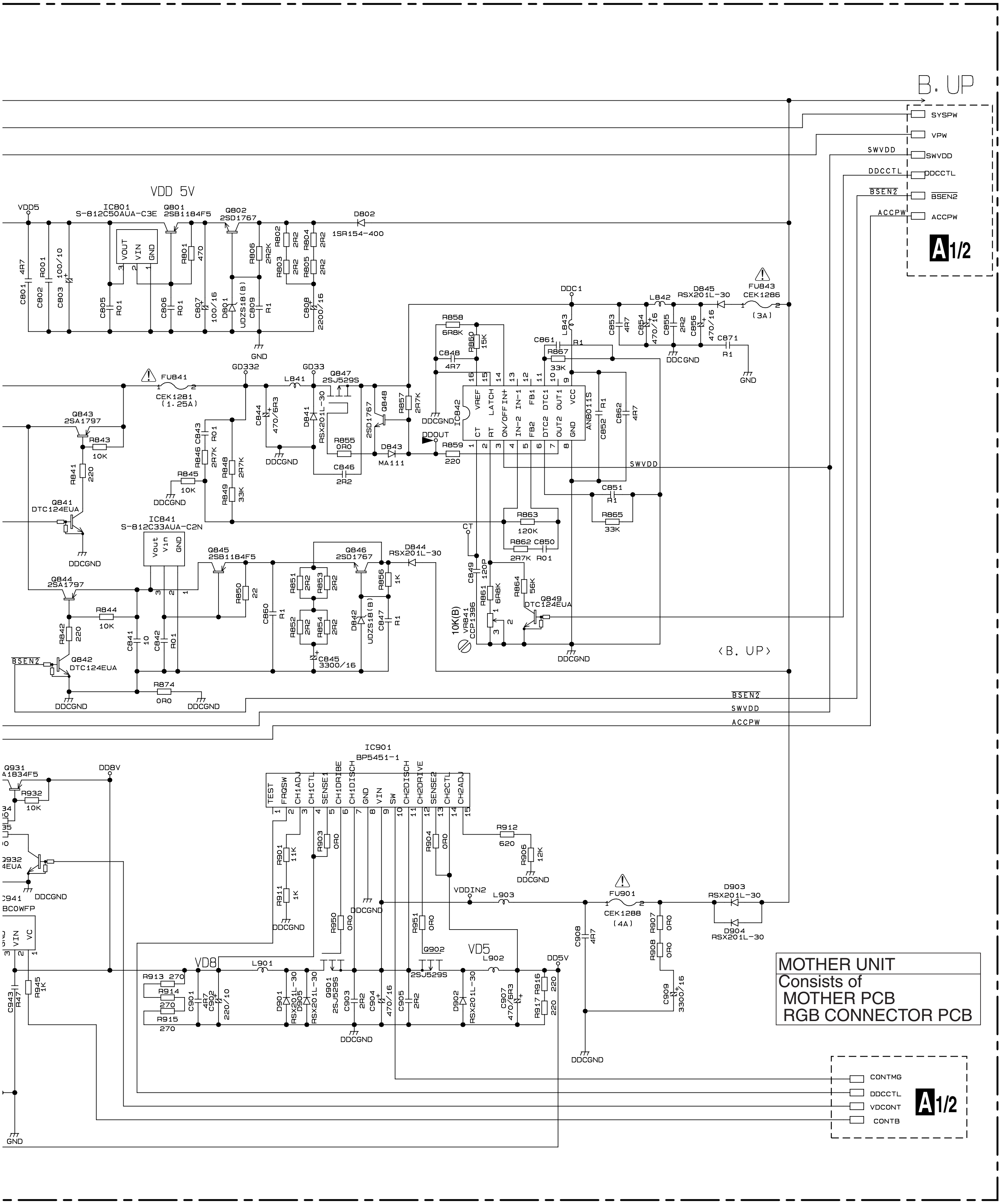

5
6
7
8
A
B
C
D
E
F
A-b 1/2
A-a 1/2
A-b
A-a
A2/2
D2/2
G CN4951
CN771
CN471
CN401
CN101
CN141
CN1901
CN351
IC651 S-80841CNUA-B82
IC652 TC7SET08FUS1
IC421 NJM4558MD
IC141 HA12241FP
IC351 SM5304AV
IC352 TC7SET08FUS1
IC353 S-80827CNUA-B8M
IC354 TC7SET08FUS1
IC355 TC74VHC08FTS1
FM/AM TUNER UNIT Y401 CWE1651
5V→3V CONVERT
IP-BUS:+15.3dBs
VCR:+15.3dBs
DVD/CD:+15.7dBs
FM(100%):-20.0dBs
AM(30%):-30.0dBs
IP-BUS:+2.2dBs
DVD/CD:+2.6dBs
IP-BUS
ACC5
VDD5
SYS+B
TUN33
VIDEO5
B.UP
ILM5V
5.0V
BVC33
VDSPU
VD5
VDB
RBU

3.4 MOTHER PCB (POWER SUPPLY)



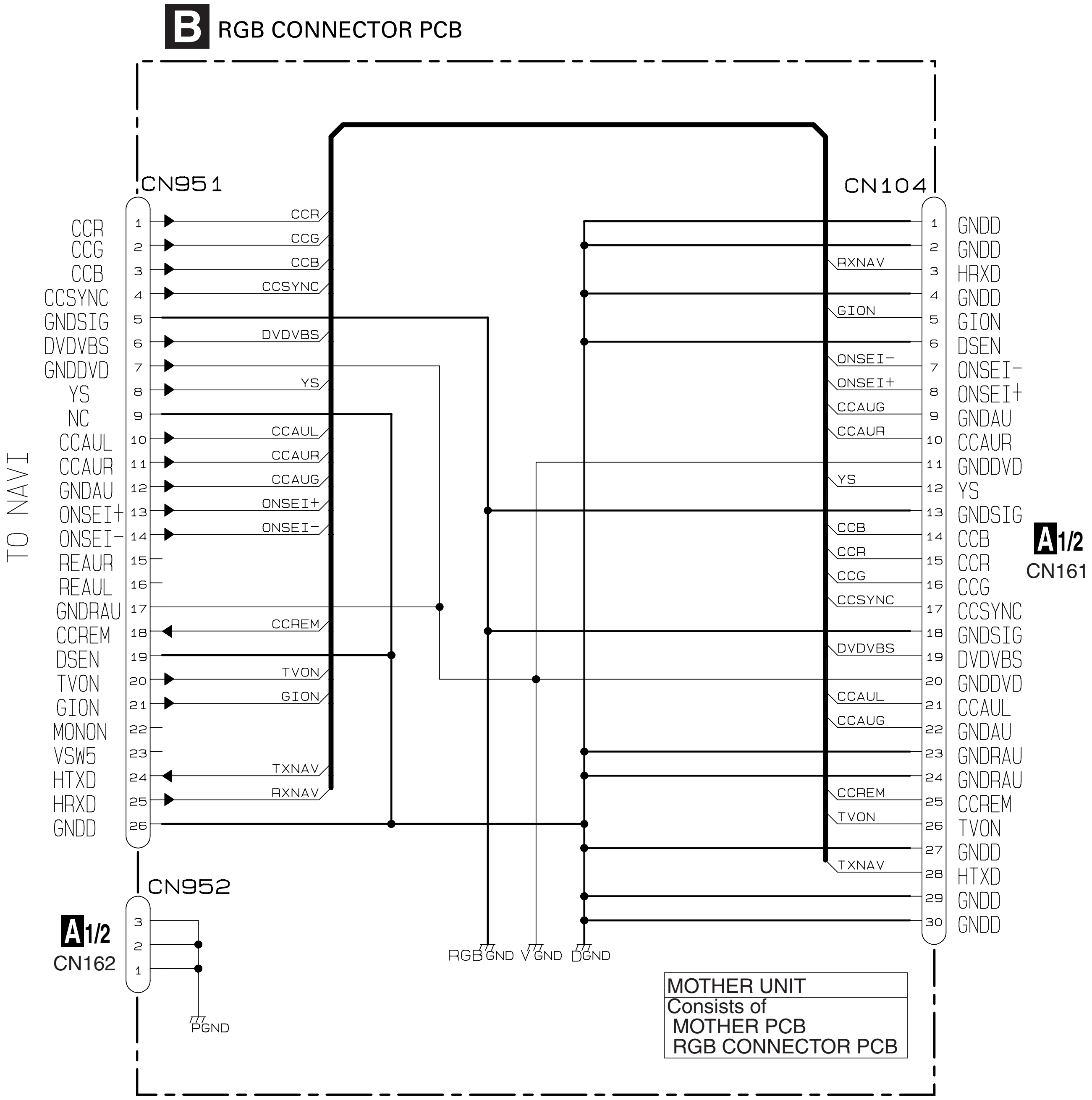
SYS+B 8.4V
TUN33 3.3V
VIDEO9 8.8V
VIDEO5 5.0V
VDD5 5.0V
ACC5 5.0V
SWVDD5 5.0V
DD33 3.5V
SWVDD33 3.4V
SWVDD25 2.5V
BVC33 3.3V
VD8 8.0V
VD5PU 5.0V
VD5 5.1V
IC821 NJM2388F84
CONTROL GND VOUT VIN
SYSBU
SYSB SYS+B
<8.4V>
<B.UP>
R821 1K
Q821 2SB1708
R825 10K
R948 470 R949 470
R823 470 R822 470
Q822 DTC114EU
SYSPW
IC822 NJM2391DL1-33
OUT GND IN
TUN3_3
TUN3
D821 1SR154-400
D822 1SR154-400
D823 1SR154-400
C825 22/6R3
C826 R01
C827 4R7
C828 R1
C829 R001
C821 100/10
C822 R01
C823 100/16
GND
VDD52
FU844 CEK1279 (0.75A)
VDD5
S-812C
C801 4R7
C802 R001
C803 100/10
C805
V9
Q831 2SD2396
VIDEO 9V
V5
Q833 2SD1767
R834 1R5K
C833 R1
C834 47/6R3
C835 R1
D832 UDZS5R6(B)
VIDEO 5V
C831 10
C832 R1
D831 HZU9R1(B3)
R831 390
R832 390
Q832 IMD2A
R833 390
VPW
DD33
SW33
Q843 2SA1797
R843 10K
R841 220
Q841 DTC124EUA
DDCGND
SWVDD
Q844 2SA1797
R842 220
Q842 DTC124E
BSEN2
L811
ACC5V
ACC5
Q804
UMF5N
R809 10K
R810 3R3K
ACCPW
SWVDD5V
Q803
UMF5N
R807 10K
R808 3R3K
C814 R1
SWVDD
FU842 CEK1279 (0.75A)
IC843 BA00BC0WFP
C VDD GND VIN VC
R871 0R0
R872 11K
R873 1K
C857 22
C858 R001
R869 220
R870 10K
C859 1
DDCGND
Q931 2SA1834F5
R932 10K
R931 100 R934 100
R933 100 R935 100
C931 1
Q932 DTC124EUA
DDCGND
IC941 BA00BC0WFP
C VDD GND VIN VC
VD5PU
C941 R001
C942 22
R943 0R0
R944 12K
R941 680
R942 3R9K
C943 R47
R945 1K
GND
BVC33
IC961 S-818A35-AUC-BGN
VOUT VIN VSS NC ON/OFF
BVC33
D961 RB060L-40
L961
C961 R22/3R5
C962 2R2
C963 1
C964 R001
GND

A2/2 MOTHER PCB (POWER SUPPLY)

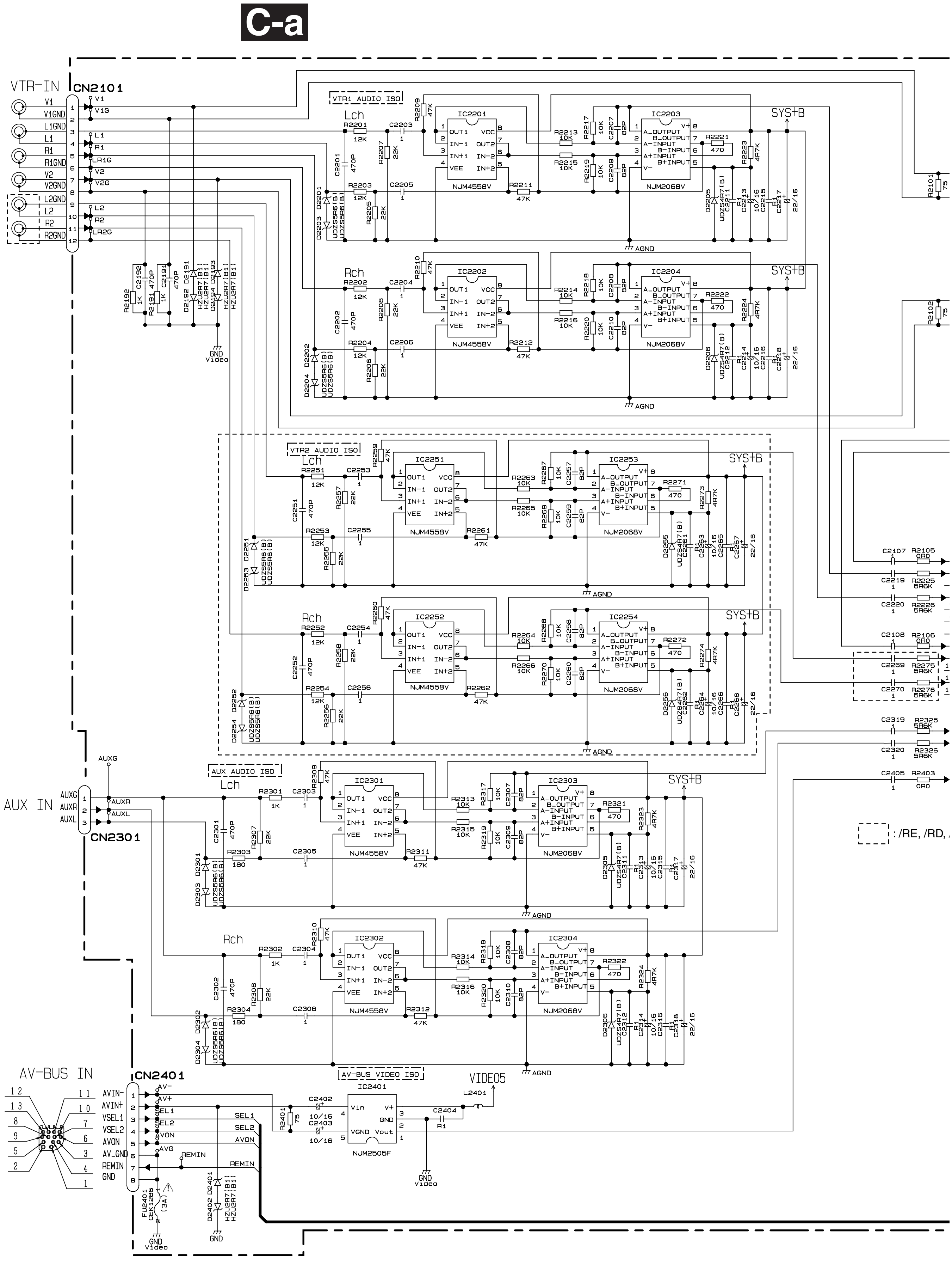

B. UP
SYSPW
VPW
SWVDD
DDCCTL
BSEN2
ACCPW
A1/2
VDD 5V
VDD5
IC801
S-812C50AUA-C3E
Q801
2SB1184F5
Q802
2SD1767
D802
1SR154-400
VOUT
VIN
GND
R801 470
R806 2R2K
R802 2R2
R803 2R2
R804 2R2
R805 2R2
C801 4R7
C802 R001
C803 100/10
C805 R01
C806 R01
C807 100/16
D801 UDZS18(B)
C809 R1
C808 2200/16
GND
DDC1
L842
D845
RSX201L-30
FU843
CEK1286
(3A)
C853 4R7
C854 470/16
C855 2R2
C856 470/16
C871 R1
DDCGND
R858 6R8K
R860 15K
C848 4R7
C861 R1
R867 33K
L843
FU841
CEK1281
(1.25A)
GD332
GD33
L841
Q847
2SJ529S
Q848
2SD1767
R857 2R7K
IC842
AN8011S
VREF
LATCH
ON/OFF
IN+
IN-1
FB1
DTC1
OUT1
VCC
CT
RT
IN-2
FB2
DTC2
OUT2
C852 R1
C862 4R7
DDOUT
R859 220
Q843
2SA1797
R843 10K
R841 220
C844 470/6R3
D841 RSX201L-30
R855 0R0
D843 MA111
C846 2R2
R846 2R7K
C843 R01
R848 2R7K
R849 33K
R845 10K
SWVDD
C851 R1
R865 33K
R863 120K
R862 2R7K
C850 R01
Q841
DTC124EUA
IC841
S-812C33AUA-C2N
Vout
Vin
Q845
2SB1184F5
Q846
2SD1767
D844
RSX201L-30
R851 2R2
R853 2R2
R852 2R2
R854 2R2
R850 22
C860 R1
R856 1K
D842 UDZS18(B)
C847 R1
C845 3300/16
CT
C849 120P
R861 6R8K
R864 56K
Q849
DTC124EUA
10K(B)
VR841
CCP1396
⟨B. UP⟩
Q844
2SA1797
R844 10K
R842 220
C841 10
C842 R01
Q842
DTC124EUA
BSEN2
R874 0R0
BSEN2
SWVDD
ACCPW
IC901
BP5451-1
TEST
FRQSW
CH1ADJ
CH1CTL
SENSE1
CH1DRIBE
CH1DISCH
GND
VIN
SW
CH2DISCH
CH2DRIVE
SENSE2
CH2CTL
CH2ADJ
R912 620
R906 12K
R901 11K
R911 1K
R903 0R0
R904 0R0
Q931
A1834F5
DD8V
R932 10K
Q932
C941
DDCGND
VIN
VC
VDDIN2
L903
FU901
CEK1288
(4A)
D903
RSX201L-30
D904
RSX201L-30
C908 4R7
R907 0R0
R908 0R0
C909 3300/16
R950 0R0
R951 0R0
Q902
2SJ529S
VD8
L901
VD5
L902
DD5V
R913 270
R914 270
R915 270
C901
C902 4R7 220/10
D901 RSX201L-30
D905 RSX201L-30
Q901 2SJ529S
C903 2R2
C904 470/16
C905 2R2
D902 RSX201L-30
C907 470/6R3
R916 220
R917 220
C943
R945 1K
CONTMG
DDCCTL
VDCONT
CONTB
A1/2
GND

MOTHER UNIT
Consists of
MOTHER PCB
RGB CONNECTOR PCB

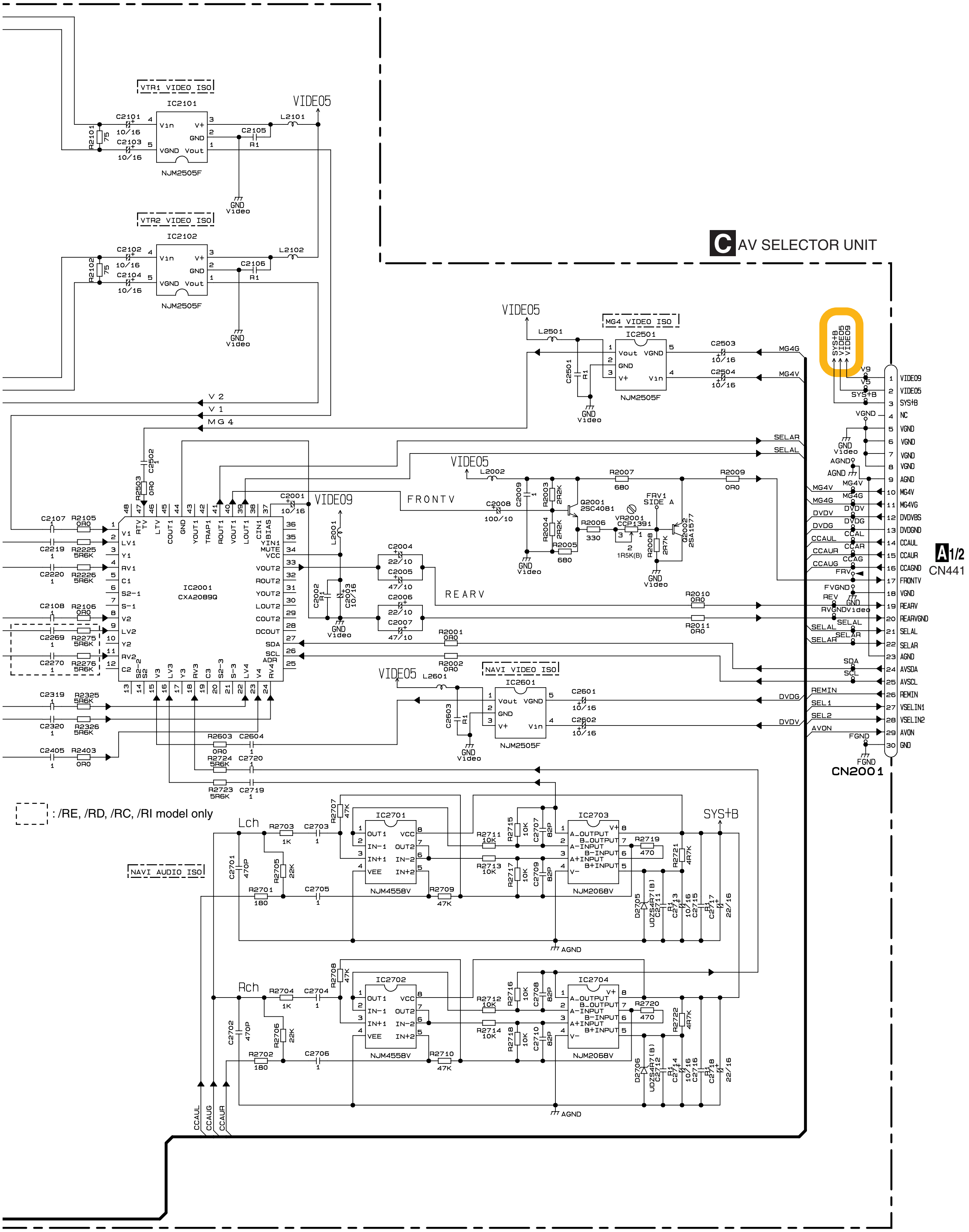
3.5 RGB CONNECTOR PCB


B RGB CONNECTOR PCB
CN951
CN104
TO NAVI
CCR
CCG
CCB
CCSYNC
GNDSIG
DVDVBS
GNDDVD
YS
NC
CCAUL
CCAUR
GNDAU
ONSEI+
ONSEI−
REAUR
REAUL
GNDRAU
CCREM
DSEN
TVON
GION
MONON
VSW5
HTXD
HRXD
GNDD
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
CCR
CCG
CCB
CCSYNC
DVDVBS
YS
CCAUL
CCAUR
CCAUG
ONSEI+
ONSEI−
CCREM
TVON
GION
TXNAV
RXNAV
RXNAV
GION
ONSEI−
ONSEI+
CCAUG
CCAUR
YS
CCB
CCR
CCG
CCSYNC
DVDVBS
CCAUL
CCAUG
CCREM
TVON
TXNAV
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
GNDD
GNDD
HRXD
GNDD
GION
DSEN
ONSEI−
ONSEI+
GNDAU
CCAUR
GNDDVD
YS
GNDSIG
CCB
CCR
CCG
CCSYNC
GNDSIG
DVDVBS
GNDDVD
CCAUL
GNDAU
GNDRAU
GNDRAU
CCREM
TVON
GNDD
HTXD
GNDD
GNDD
A 1/2
CN161
CN952
3 2 1
A 1/2
CN162
PGND
RGB GND
V GND
D GND
MOTHER UNIT
Consists of
MOTHER PCB
RGB CONNECTOR PCB

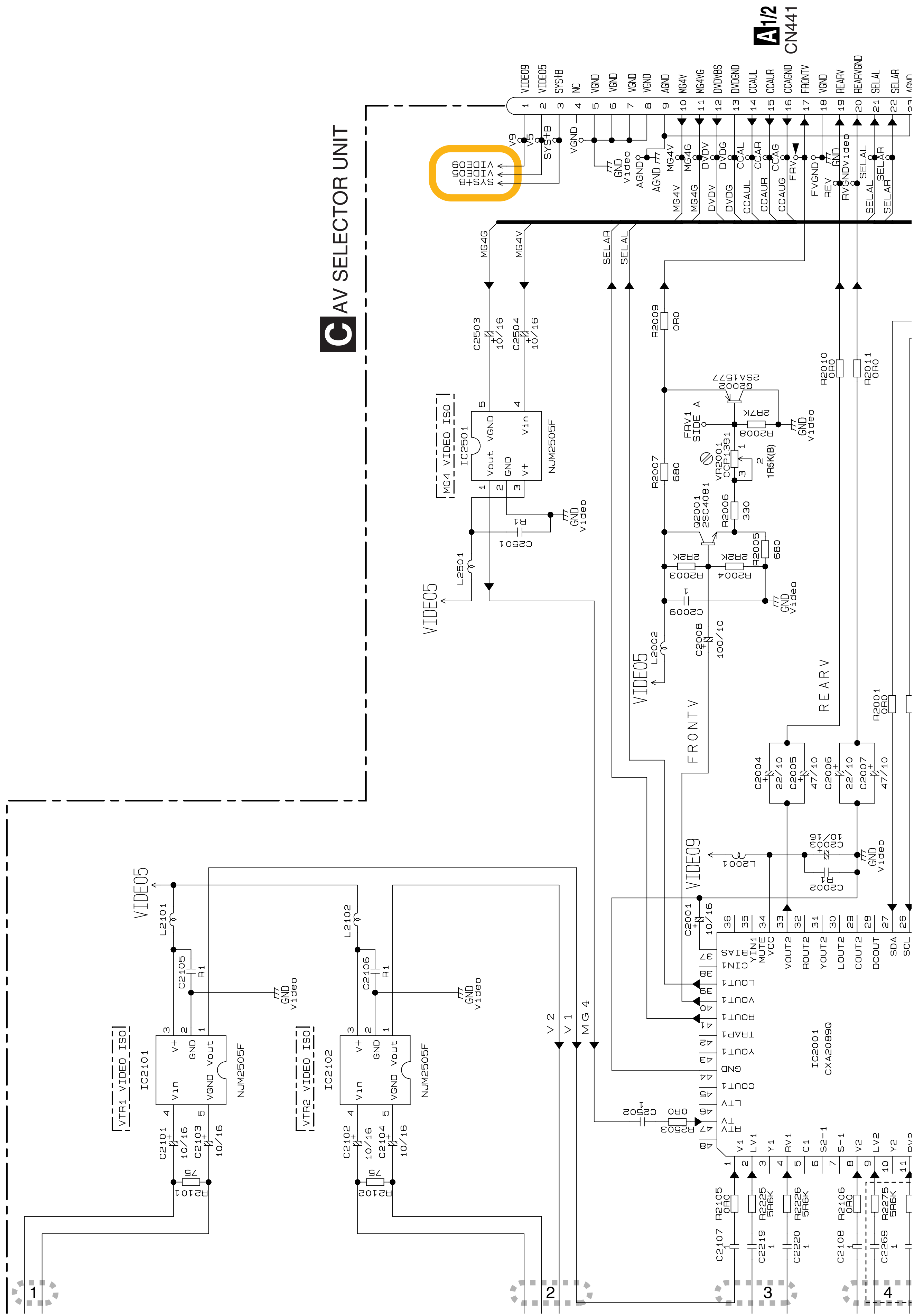
3.6 AV SELECTOR UNIT(GUIDE PAGE)


C-a
VTR-IN
CN2101
V1
V1GND
L1GND
L1
R1
R1GND
V2
V2GND
L2GND
L2
R2
R2GND
VTR1 AUDIO ISO
Lch
Rch
IC2201
IC2202
IC2203
IC2204
NJM4558V
NJM2068V
SYS+B
AGND
GND Video
R2101 75
R2102 75
VTR2 AUDIO ISO
IC2251
IC2252
IC2253
IC2254
C2107 R2105 0R0
C2219 R2225 5R6K
C2220 R2226 5R6K
C2108 R2106 0R0
C2269 R2275 5R6K
C2270 R2276 5R6K
C2319 R2325 5R6K
C2320 R2326 5R6K
C2405 R2403 0R0
: /RE, /RD,
AUX IN
AUXG
AUXR
AUXL
CN2301
AUX AUDIO ISO
IC2301
IC2302
IC2303
IC2304
AV-BUS IN
CN2401
AVIN-
AVIN+
VSEL1
VSEL2
AVON
AV_GND
REMIN
GND
AV-BUS VIDEO ISO
IC2401
NJM2505F
VIDEO5
L2401
SEL1
SEL2
AVON
REMIN
FU2401 CEK1286 (3A)
D2402 D2401 HZU2R7(B1)
GND Video
GND

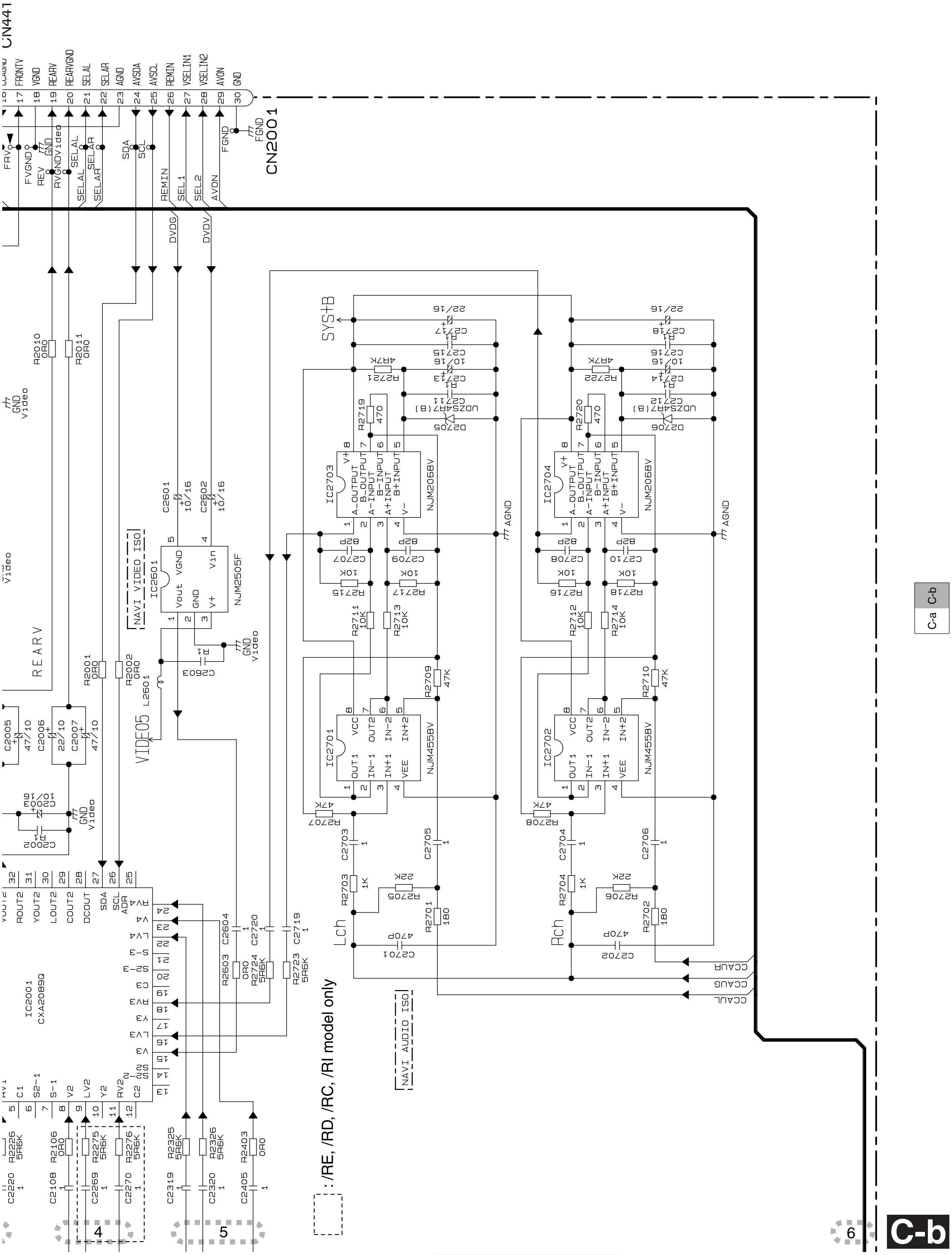
C-b


C AV SELECTOR UNIT
VTR1 VIDEO ISO
IC2101
NJM2505F
VTR2 VIDEO ISO
IC2102
VIDEO5
VIDEO9
MG4 VIDEO ISO
IC2501
NAVI VIDEO ISO
IC2601
IC2001
CXA2089Q
FRONTV
REARV
Q2001
2SC4081
Q2002
2SA1577
VR2001
CCP1391
FRV1 SIDE A
V 2
V 1
MG 4
NAVI AUDIO ISO
Lch
Rch
IC2701
IC2702
NJM4558V
IC2703
IC2704
NJM2068V
SYS+B
AGND
GND Video
CCAUL
CCAUG
CCAUR
CN2001
A 1/2
CN441
VIDEO9
VIDEO5
SYS+B
NC
VGND
AGND
MG4V
MG4VG
DVDVBS
DVDVGND
CCAUL
CCAUR
CCAGND
FRONTV
REARV
REARVGND
SELAL
SELAR
AVSDA
AVSCL
REMIN
VSELIN1
VSELIN2
AVON
GND

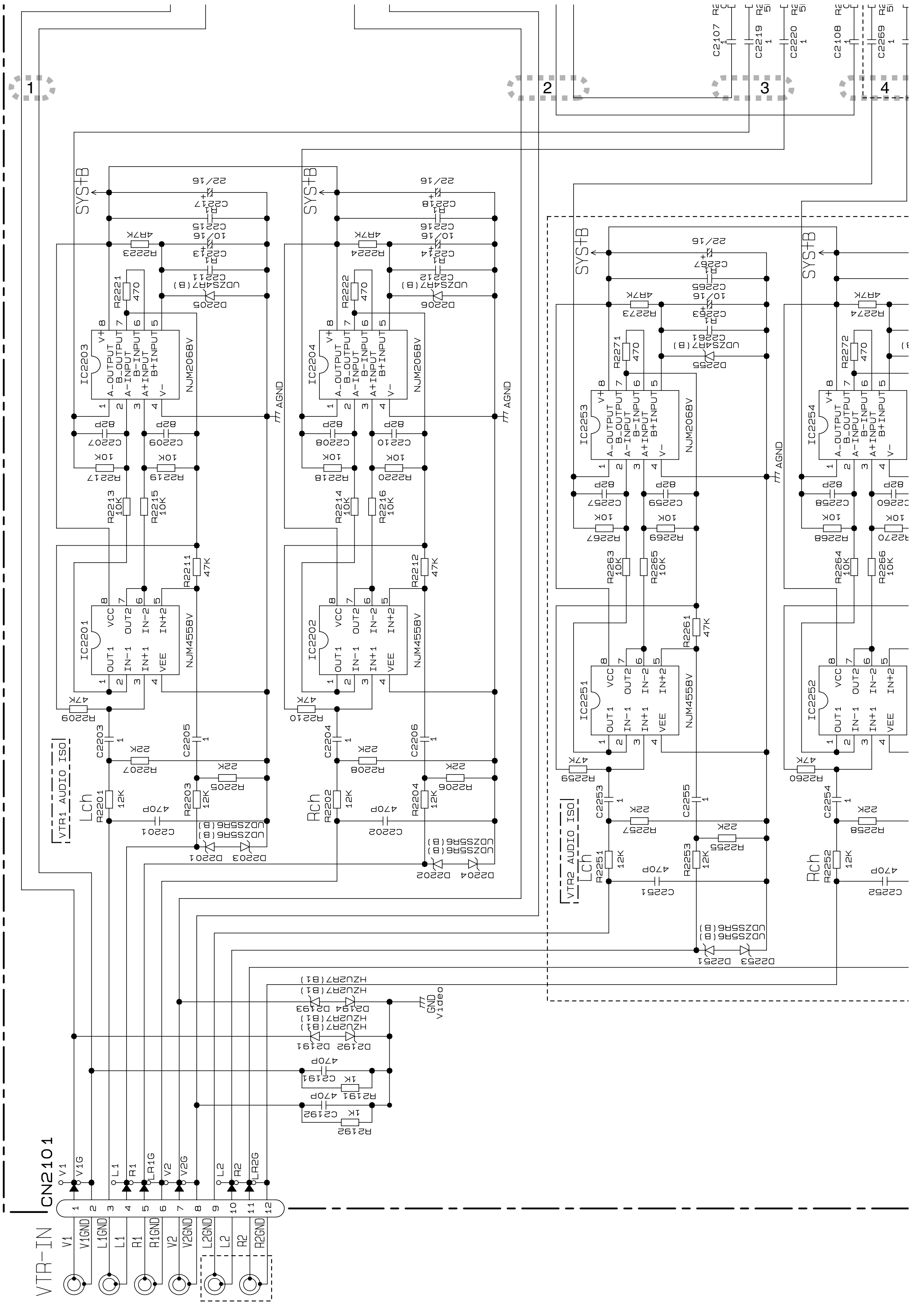
: /RE, /RD, /RC, /RI model only


C AV SELECTOR UNIT
A 1/2 CN441
VIDEO9
VIDEO5
SYS+B
NC
VGND
AGND
MG4V
MG4G
DVDVBS
DVDGND
CCAUL
CCAUR
CCAGND
FRONTV
REARV
REARVGND
SELAL
SELAR
MG4 VIDEO ISO
IC2501
NJM2505F
C2503 10/16
C2504 10/16
C2501 1
L2501
VIDEO5
R2009 0R0
R2007 680
Q2002 2SA1577
R2008 2R7K
FRV1 SIDE A
VR2001 CCP1391 1R5K(B)
Q2001 2SC4081
R2006 330
R2005 680
R2003 2R2K
R2004 2R2K
C2009 1
C2008 100/10
L2002
VIDEO5
FRONTV
REARV
R2010 0R0
R2011 0R0
R2001 0R0
C2004 22/10
C2005 47/10
C2006 22/10
C2007 47/10
C2003 10/16
C2002 1
L2001
VIDEO9
C2001 10/16
IC2001 CXA2089Q
C2502 1
R2503 0R0
V2
V1
MG4
VTR1 VIDEO ISO
IC2101
NJM2505F
C2101 10/16
C2103 10/16
R2101 75
C2105 R1
L2101
VIDEO5
VTR2 VIDEO ISO
IC2102
NJM2505F
C2102 10/16
C2104 10/16
R2102 75
C2106 R1
L2102
GND Video
R2105 0R0
R2225 5R6K
R2226 5R6K
R2106 0R0
R2275 5R6K
C2107 1
C2219 1
C2220 1
C2108 1
C2269 1
1
2
3
4

C-b

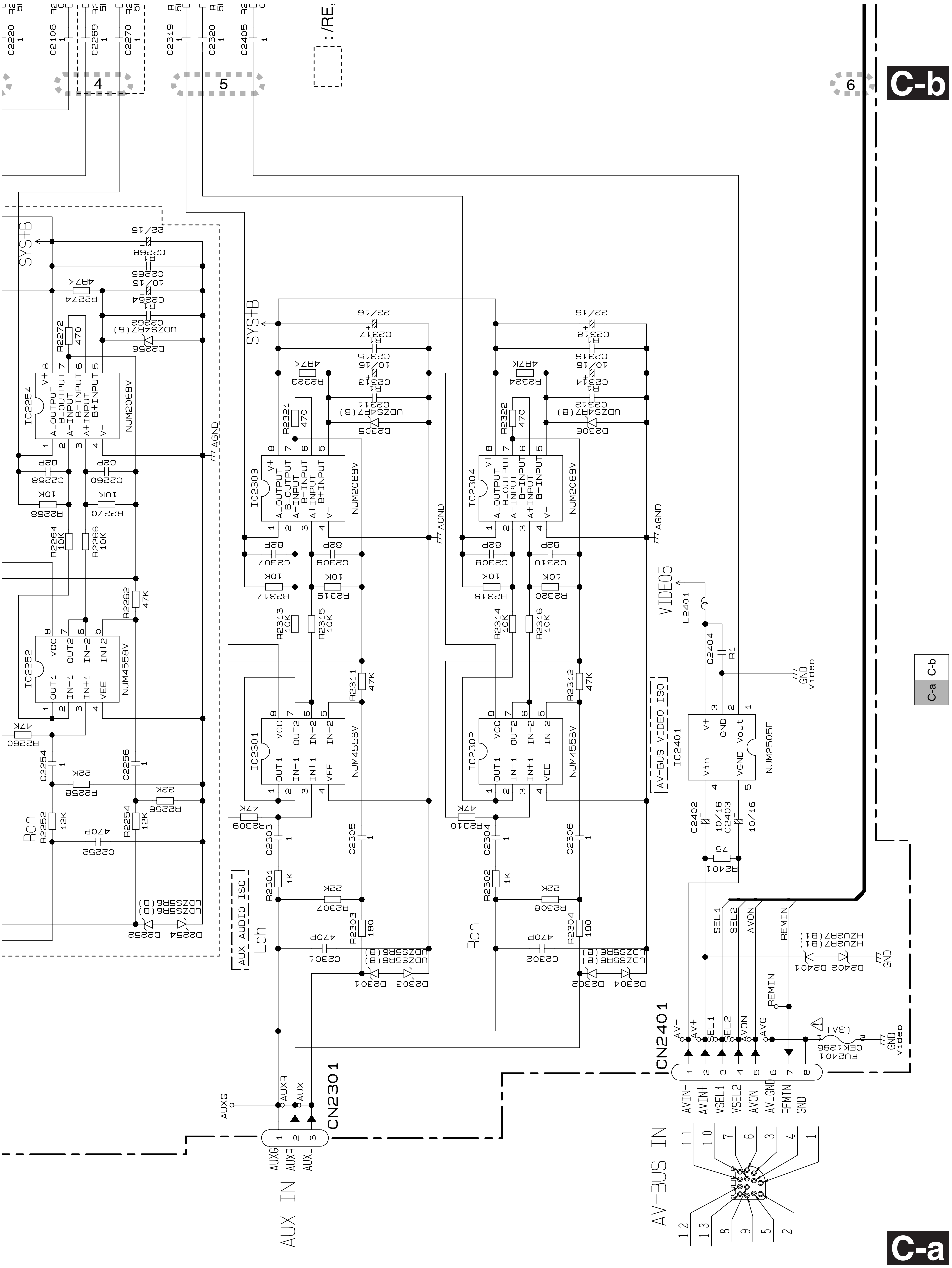

CN441
CN2001
IC2001
CXA2089Q
IC2601
NJM2505F
NAVI VIDEO ISO
IC2701
NJM4558V
IC2702
NJM4558V
IC2703
NJM2068V
IC2704
NJM2068V
NAVI AUDIO ISO
SYS+B
Lch
Rch
CCAUR
CCAUG
CCAUL
VIDEO5
L2601
REMIN
SEL1
SEL2
AVON
DVDG
DVDV
REARV
AGND
GND Video
FGND
D2705 UDZS4R7(B)
D2706 UDZS4R7(B)
: /RE, /RD, /RC, /RI model only
4
5
6
C-b

C-b


1
2
3
4
C2107
C2219
C2220
C2108
C2269
SYS+B
C2217 22/16
C2218 22/16
C2215 10/16
C2216 10/16
C2213
C2214
R2223 4R7K
R2224 4R7K
C2211
C2212
D2205 UDZS4R7(B)
D2206 UDZS4R7(B)
R2221 470
R2222 470
IC2203 NJM2068V
IC2204 NJM2068V
A-OUTPUT
B-OUTPUT
A-INPUT
B-INPUT
A+INPUT
B+INPUT
V+
V-
AGND
C2207 82P
C2209 82P
C2208 82P
C2210 82P
R2217 10K
R2219 10K
R2218 10K
R2220 10K
R2213 10K
R2215 10K
R2214 10K
R2216 10K
R2211 47K
R2212 47K
IC2201 NJM4558V
IC2202 NJM4558V
VCC
VEE
OUT1
OUT2
IN-1
IN+1
IN-2
IN+2
R2209 47K
R2210 47K
C2203 1
C2205 1
C2204 1
C2206 1
R2207 22K
R2205 22K
R2208 22K
R2206 22K
VTR1 AUDIO ISO
Lch
Rch
R2201 12K
R2203 12K
R2202 12K
R2204 12K
C2201 470P
C2202 470P
D2201 UDZS5R6(B)
D2203 UDZS5R6(B)
D2202 UDZS5R6(B)
D2204 UDZS5R6(B)
C2267 22/16
C2265 10/16
C2263
R2273 4R7K
R2274 4R7K
C2261
D2255 UDZS4R7(B)
R2271 470
R2272 470
IC2253 NJM2068V
IC2254
C2257 82P
C2259 82P
C2258 82P
C2260 82P
R2267 10K
R2269 10K
R2268 10K
R2270 10K
R2263 10K
R2265 10K
R2264 10K
R2266 10K
R2261 47K
IC2251 NJM4558V
IC2252
R2259 47K
R2260 47K
C2253 1
C2255 1
C2254 1
R2257 22K
R2255 22K
R2258 22K
VTR2 AUDIO ISO
R2251 12K
R2253 12K
R2252 12K
C2251 470P
C2252 470P
D2251 UDZS5R6(B)
D2253 UDZS5R6(B)
D2193 HZU2R7(B1)
D2194 HZU2R7(B1)
D2191 HZU2R7(B1)
D2192 HZU2R7(B1)
GND Video
C2191 470P
R2191 1K
C2192 470P
R2192 1K
CN2101
V1
V1G
L1
R1
LR1G
V2
V2G
L2
R2
LR2G
1 2 3 4 5 6 7 8 9 10 11 12
VTR-IN
V1GND
L1GND
R1GND
V2GND
L2GND
R2GND

C-b
C-a

C-a



C2220
C2108
C2269
C2270
C2319
C2320
C2405
4
5
6
:/RE
C-b
C-a
C-a C-b
SYS+B
C2268 22/16
C2266 R1
C2264 10/16
R2274 4R7K
C2262 R1
D2256 UDZS4R7(B)
R2272 470
IC2254
NJM2068V
A-OUTPUT
B-OUTPUT
A-INPUT
B-INPUT
A+INPUT
B+INPUT
V+
V-
AGND
C2258 82P
C2260 82P
R2268 10K
R2270 10K
R2264 10K
R2266 10K
R2262 47K
IC2252
NJM4558V
OUT1
OUT2
IN-1
IN-2
IN+1
IN+2
VCC
VEE
R2260 47K
C2254 1
C2256 1
R2258 22K
R2256 22K
R2252 12K
R2254 12K
C2252 470P
Rch
D2252 UDZS5R6(B)
D2254 UDZS5R6(B)
IC2303
IC2304
C2317 22/16
C2318 22/16
C2315 R1
C2316 R1
C2313 10/16
C2314 10/16
R2323 4R7K
R2324 4R7K
C2311 R1
C2312 R1
D2305 UDZS4R7(B)
D2306 UDZS4R7(B)
R2321 470
R2322 470
C2307 82P
C2309 82P
C2308 82P
C2310 82P
R2317 10K
R2319 10K
R2318 10K
R2320 10K
R2313 10K
R2315 10K
R2314 10K
R2316 10K
R2311 47K
R2312 47K
IC2301
IC2302
NJM4558V
R2309 47K
R2310 47K
C2303 1
C2305 1
C2304 1
C2306 1
R2301 1K
R2302 1K
R2307 22K
R2308 22K
R2303 180
R2304 180
C2301 470P
C2302 470P
Lch
Rch
AUX AUDIO ISO
D2301 UDZS5R6(B)
D2303 UDZS5R6(B)
D2302 UDZS5R6(B)
D2304 UDZS5R6(B)
VIDEO5
L2401
C2404 R1
GND Video
AV-BUS VIDEO ISO
IC2401
NJM2505F
V+
GND
Vout
Vin
VGND
C2402 10/16
C2403 10/16
R2401 75
SEL1
SEL2
AVON
REMIN
D2401 HZU2R7(B1)
D2402 HZU2R7(B1)
GND
REMIN
CN2401
AV-
AV+
SEL1
SEL2
AVON
AVG
FU2401 CEK1286 (3A)
GND Video
AVIN-
AVIN+
VSEL1
VSEL2
AVON
AV_GND
REMIN
GND
AV-BUS IN
11 10 7 6 3 4 1
12 13 8 9 5 2
AUXG
AUXR
AUXL
CN2301
AUX IN

3.7 DVD CORE UNIT (1/2)(GUIDE PAGE)

A

B

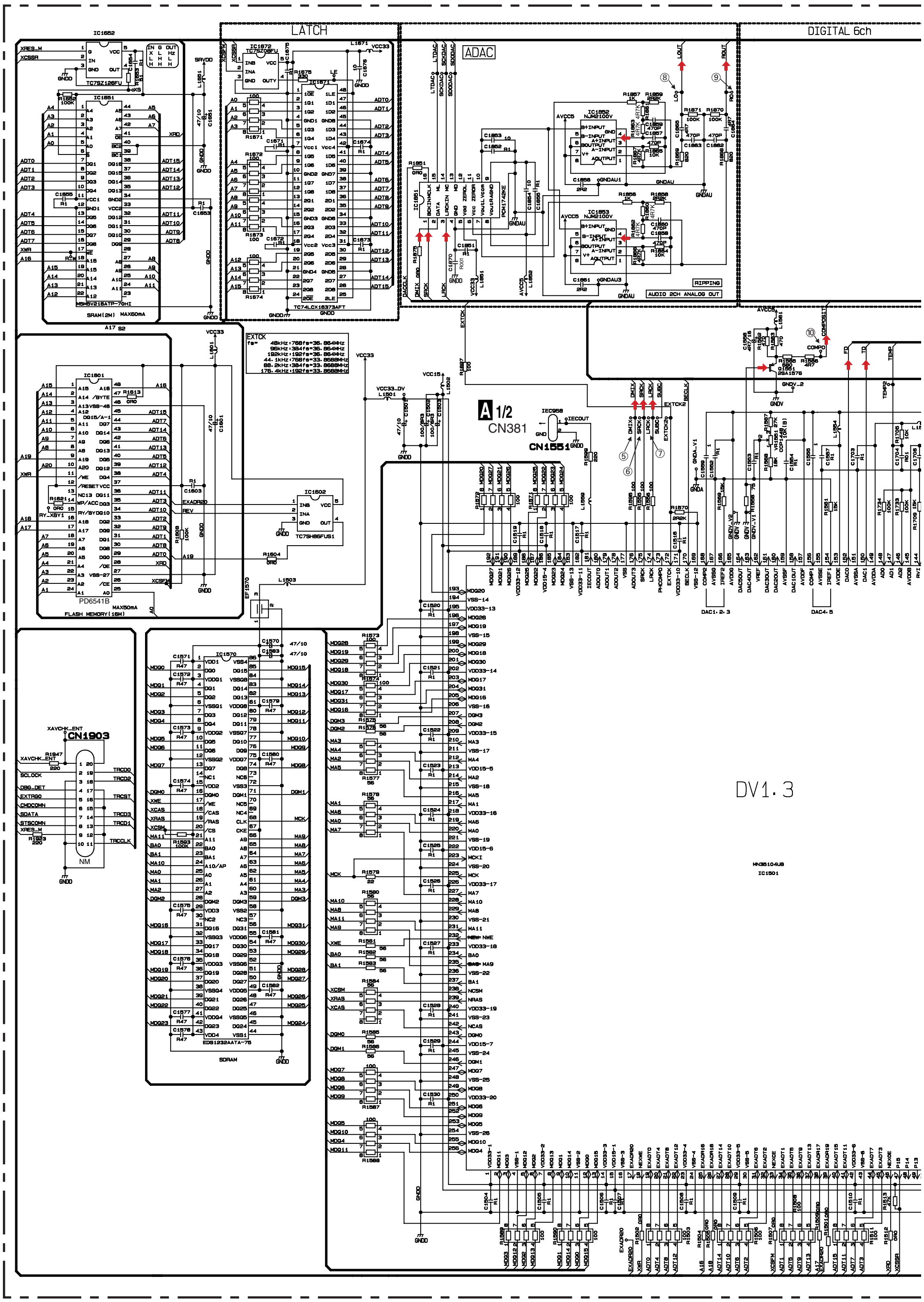
C

D

E

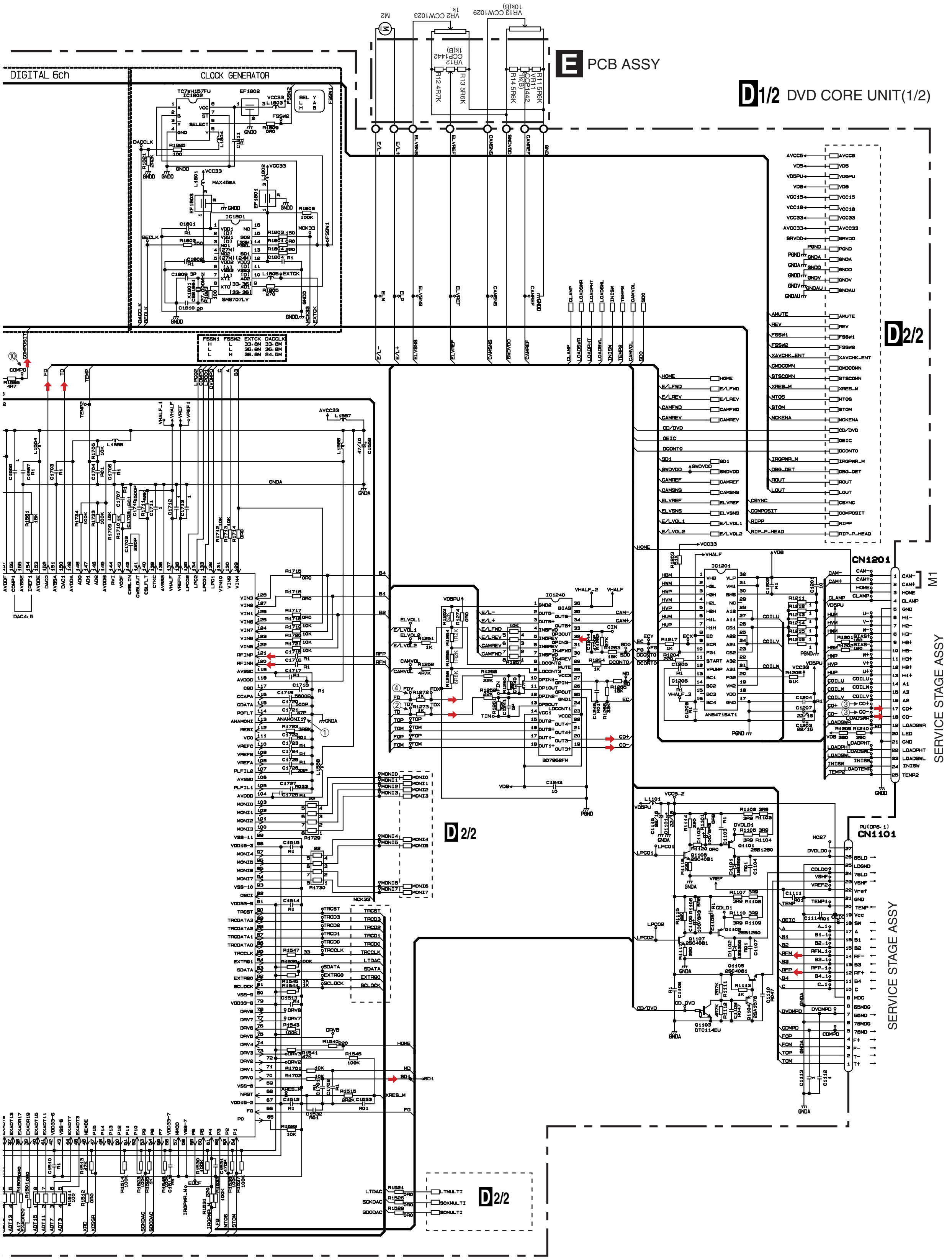
F

D-a 1/2


IC1652
TC7SZ126FU
LATCH
IC1672
TC7SZ08FU
IC1671
TC74LCX16373AFT
ADAC
IC1651
PCM1742KE
IC1652
NJM2100V
IC1653
NJM2100V
AUDIO 2CH ANALOG OUT
RIPPING
DIGITAL 6ch
M5M5V216ATP-70HI
SRAM(2M) MAX60mA
IC1601
PD6541B
FLASH MEMORY(16M) MAX50mA
EXTCK
fs=
48kHz:768fs=36.864MHz
96kHz:384fs=36.864MHz
192kHz:192fs=36.864MHz
44.1kHz:768fs=33.8688MHz
88.2kHz:384fs=33.8688MHz
176.4kHz:192fs=33.8688MHz
IC1602
TC7SH08FUS1
A 1/2
CN381
CN1551
CN1903
IC1570
EDS1232AATA-75
SDRAM
DV1.3
MN38104UB
IC1501
DAC1.2.3
DAC4.5

D 1/2

D-b 1/2


E PCB ASSY
D1/2 DVD CORE UNIT(1/2)
DIGITAL 6ch
CLOCK GENERATOR
TC7WH157FU IC1802
EF1802
MAX45mA
IC1801
SM8707LV
VR12 CCW1023 1K
VR13 CCW1029 10K(B)
M2
D2/2
CN1201
IC1201
AN8471SAT1
IC1240
BD7962FM
M1
SERVICE STAGE ASSY
PU(DP6.1)
CN1101
DAC4:5
GNDA
PGND
AVCC33
VCC33
VDSPU
HOME
CAM+
CAM-
CLAMP
LOADSWR
LOADPHT
LOADSWL
INISW
TEMP2
LTMULTI
SCKMULTI
SDMULTI

D1/2 E

A

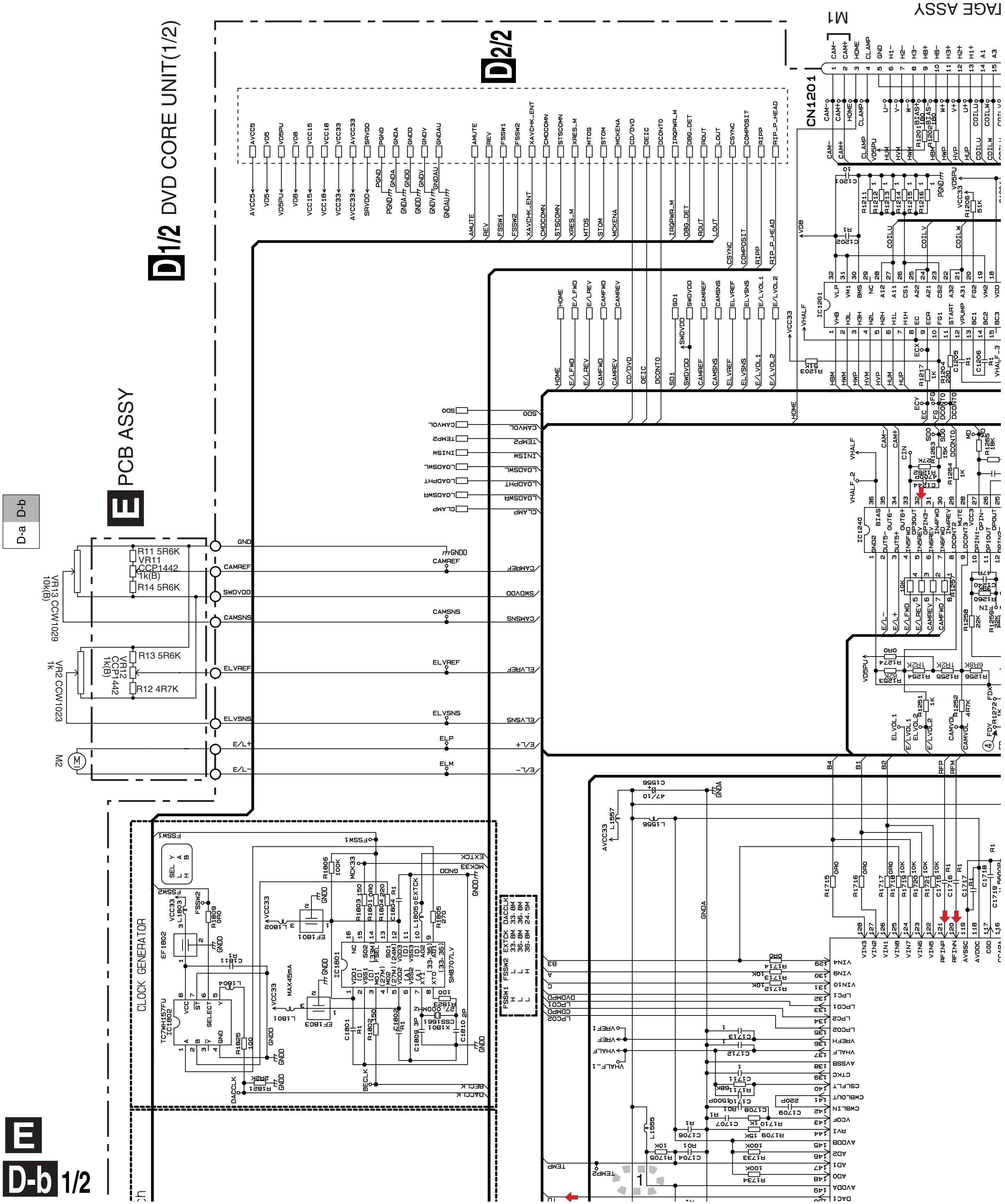
B

C

D

E

F


D 1/2 DVD CORE UNIT(1/2)
D 2/2
E PCB ASSY
E
D-b 1/2
D-a
D-b
CN1201
M1
IC1201
IC1240
IC1801
SMB707LV
IC1802
TC7WH157FU
CLOCK GENERATOR
EF1802
EF1801
EF1803
X1801
CSS1661
MAX45mA
VR13 CCW1029 10k(B)
VR11 CCP1442 1k(B)
VR12 CCP1442 1k(B)
VR2 CCW1023 1k
R11 5R6K
R14 5R6K
R13 5R6K
R12 4R7K
M2
GND
CAMREF
SWDVDD
CAMSNS
ELVREF
ELVSNS
E/L+
E/L-
ELP
ELM
SDO
CAMVOL
TEMP2
INISW
LOADSWL
LOADPHT
LOADSWR
CLAMP
AVCC5
VD5
VD5PU
VD8
VCC15
VCC18
VCC33
AVCC33
SRVDD
PGND
GNDA
GNDD
GNDV
GNDAU
AMUTE
REV
FSSW1
FSSW2
XAVCHK_ENT
CMDCOMN
STSCOMN
XRES_M
MTOS
STOM
MCKENA
CD/DVD
OEIC
DCONTO
IRQPWR_M
DBG_DET
ROUT
LOUT
CSYNC
COMPOSIT
RIPP
RIP_P_HEAD
HOME
E/LFWD
E/LREV
CAMFWD
CAMREV
SD1
SWDVDD
CAMREF
CAMSNS
ELVREF
ELVSNS
E/LVOL1
E/LVOL2
VHALF
VHALF_2
FSSW1 FSSW2 EXTCK DACCLK
H L 33.8M 33.8M
L H 36.8M 36.8M
L L 35.8M 24.5M
SEL Y L A H B
EXTCK
MCK33
DACCLK
BECLK
TEMP
TEMP2
AVCC33
L1557
L1556
C1556
L1555
VIN4
VIN9
VIN10
LPC1
LPCO1
LPC2
LPCO2
VREFH
VHALF
AVSSB
CTKC
CSLFLT
CWBLOUT
CWBLIN
VCOF
RVI
AVDDB
ADC2
ADI1
ADO
AVDDA
DAC1
RFINP
RFINN
AVSSC
AVDDC
RFP
RFM
B1
B2
B4

A

B

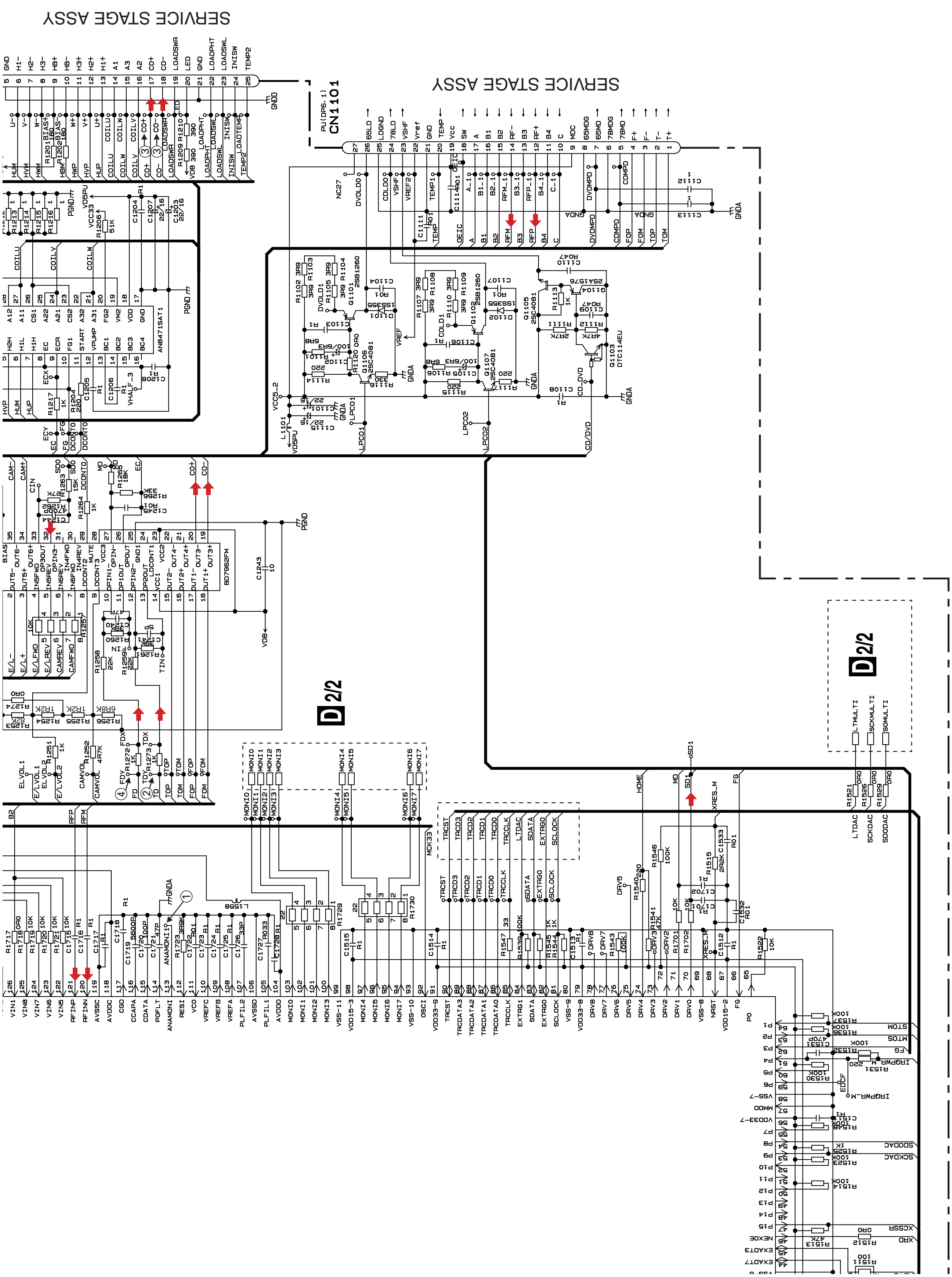
C

D

E

F

D-a D-b


SERVICE STAGE ASSY
SERVICE STAGE ASSY
CN1101
PU(DP6.1)
AN8471SAT1
BD7962FM
D 2/2
D 2/2
GNDD
PGND
GNDA
VDSPU
VCC5_2
L1101
LPCO1
LPCO2
CD/DVD
DTC114EU
2SA1576
2SB1260
2SC4081
1SS355
MONI0
MONI1
MONI2
MONI3
MONI4
MONI5
MONI6
MONI7
LTMULTI
SCKMULTI
SOMULTI
LTDAC
SCKDAC
SDODAC
XRES_M
HOME
MD
SD1
FG
VD8

D-b 1/2

E

D-b 1/2

A

B

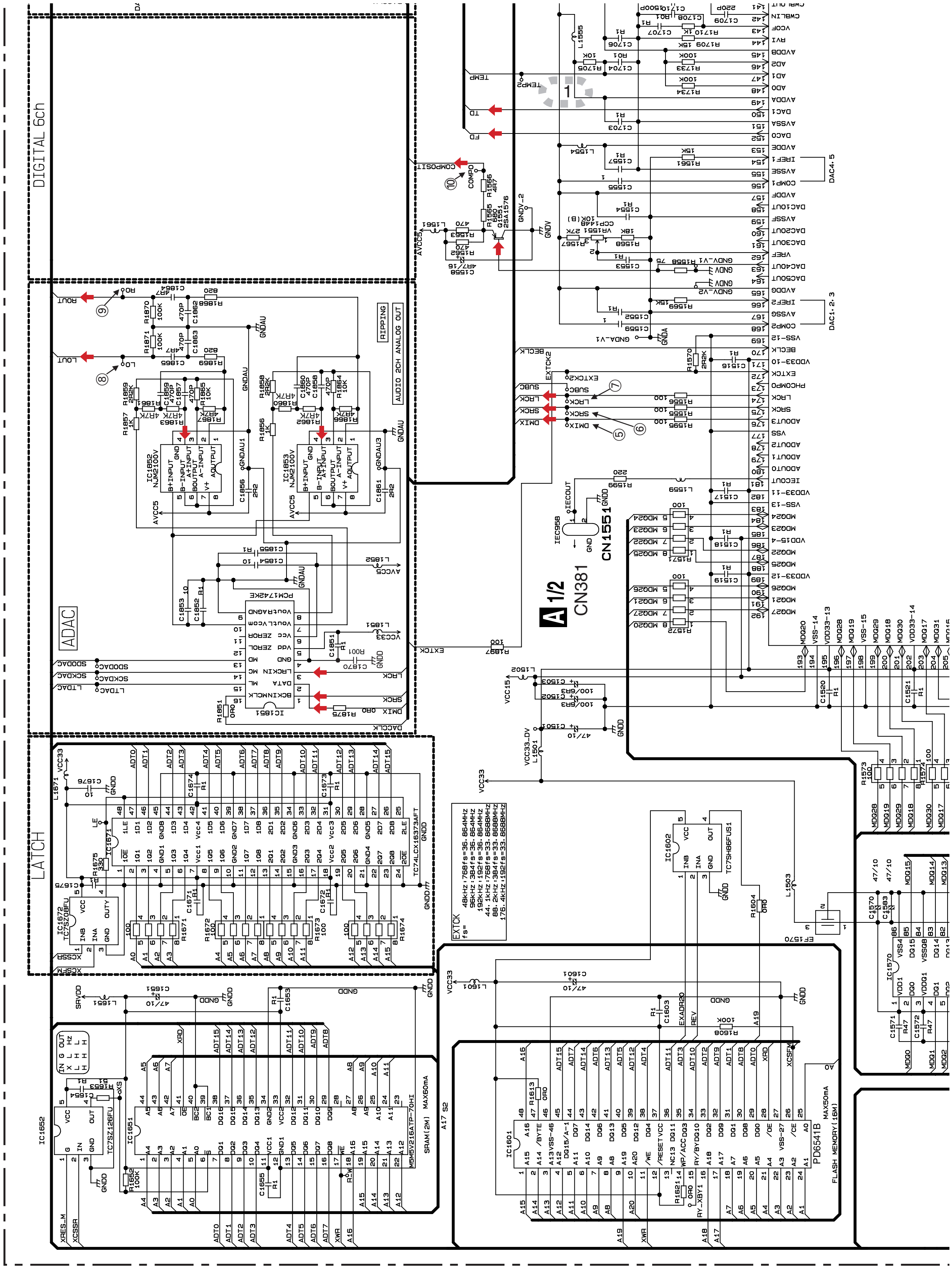
C

D

D-a D-b

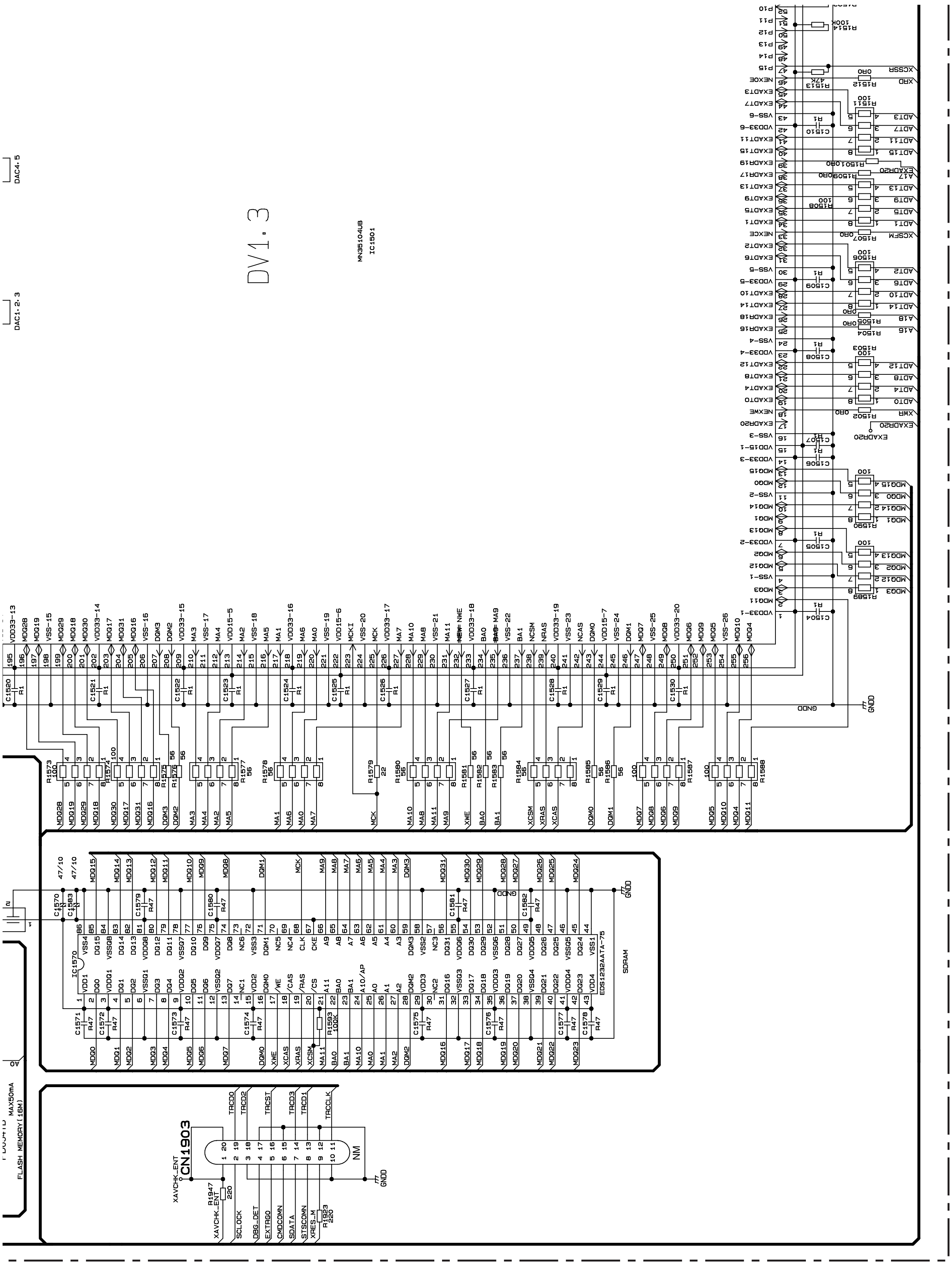
E

F


DIGITAL 6ch
AUDIO 2CH ANALOG OUT
RIPPING
ADAC
LATCH
A 1/2
CN381
CN1551
IC1652 NJM2100V
IC1653 NJM2100V
IC1851 PCM1742KE
IC1671 TC74LCX16373AFT
IC1672 TC7SZ08FU
IC1651 M5M5V216ATP-70HI
SRAM(2M) MAX60mA
IC1652 TC7SZ126FU
IC1601 PD6541B
FLASH MEMORY(16M) MAX50mA
IC1602 TC7SH86FUS1
Q1551 2SA1576
IEC958
EXTCK fs=
48kHz:768fs=36.864MHz
96kHz:384fs=36.864MHz
192kHz:192fs=36.864MHz
44.1kHz:768fs=33.8688MHz
88.2kHz:384fs=33.8688MHz
176.4kHz:192fs=33.8688MHz
ROUT
LOUT
COMPOSIT
TEMP
TD
FD
DAC4,5
DAC1,2,3
LRCK
SRCK
DMIX
SUBC
EXTCK
DACCLK
SDDAC
SCKDAC
LTDAC
VCC33
VCC15
SRVDD
XRES_M
XCSSR

D-a 1/2

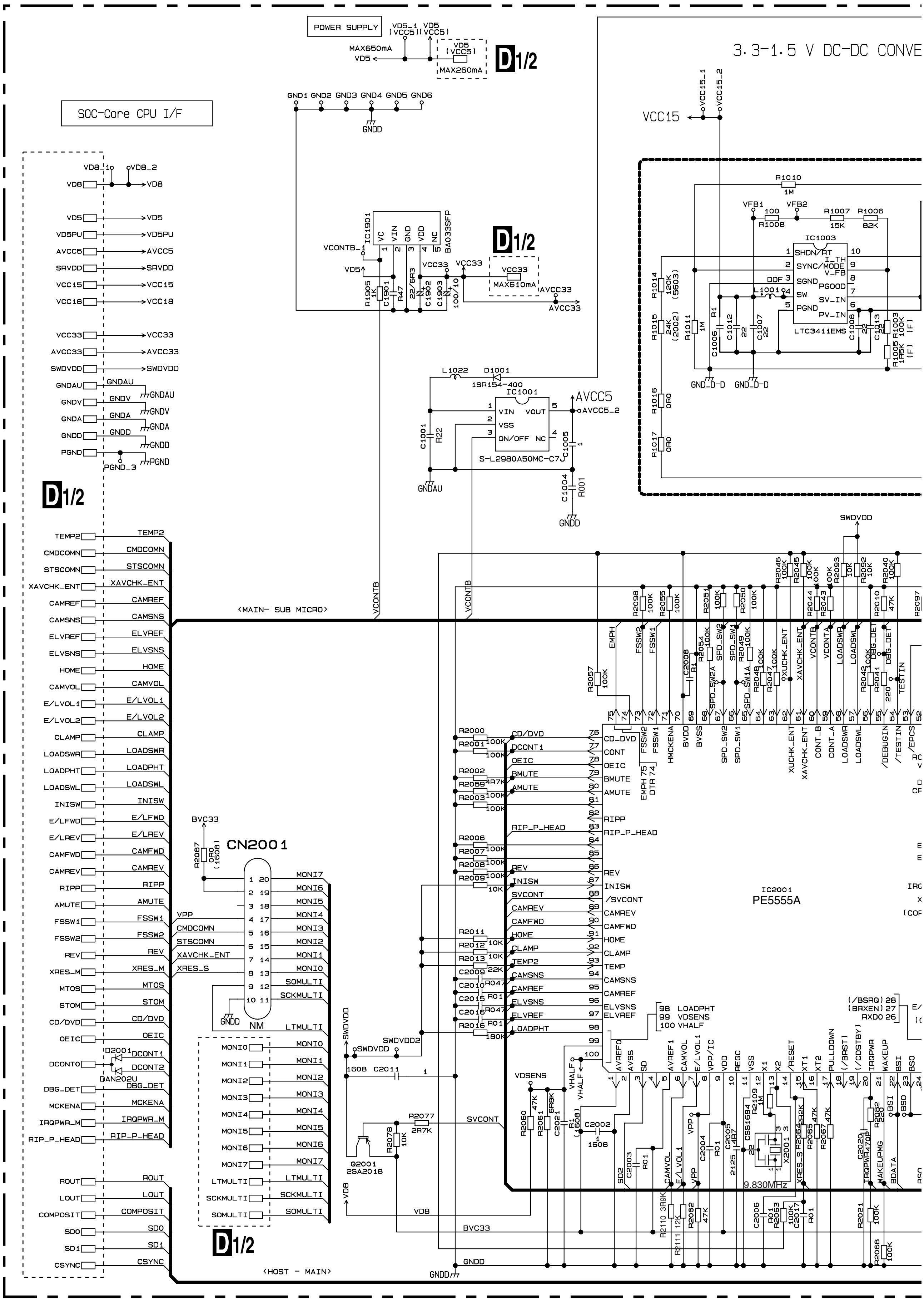
D-b 1/2


DV1.3
MN35104UB
IC1501
DAC4.5
DAC1.2.3
IC1570
SDRAM
EDS1232AATA-75
CN1903
NM
FLASH MEMORY(16M)
MAX50mA
XAVCHK_ENT
SCLOCK
DBG_DET
EXTRG0
CMDCOMN
SDATA
STSCOMN
XRES_M
TRCD0
TRCD2
TRCST
TRCD3
TRCD1
TRCCLK
R1947 220
R1923 220
GNDD
D-a
D-b

A
B
C
D
E
F

D-a 1/2

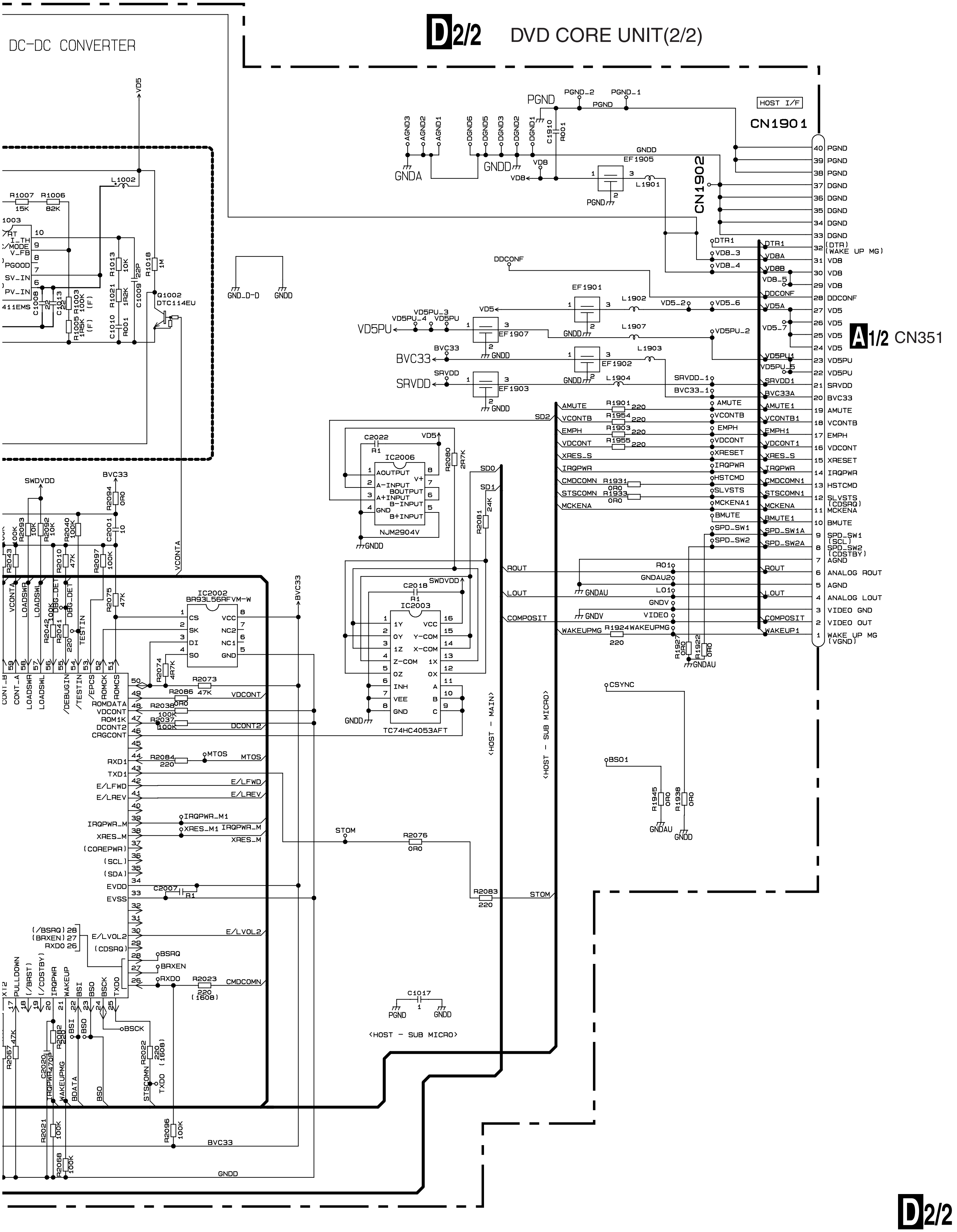
3.8 DVD CORE UNIT (2/2)



POWER SUPPLY
VD5_1 (VCC5)
VD5 (VCC5)
MAX650mA
MAX260mA
D1/2
3.3-1.5 V DC-DC CONVE
GND1 GND2 GND3 GND4 GND5 GND6
GNDD
SOC-Core CPU I/F
VCC15
VCC15_1
VCC15_2
VD8_1
VD8_2
VD8
VD5
VD5PU
AVCC5
SRVDD
VCC15
VCC18
VCC33
AVCC33
SWDVDD
GNDAU
GNDV
GNDA
GNDD
PGND
PGND_3
IC1901
BA033SFP
VCONTB_1
VCC33
MAX610mA
AVCC33
R1010 1M
VFB1
VFB2
R1008 100
R1007 15K
R1006 82K
IC1003
LTC3411EMS
SHDN/RT
SYNC/MODE
SGND
SW
PGND
I_TH
V_FB
PGOOD
SV_IN
PV_IN
L1001
GND_D-D
L1022
D1001
1SR154-400
IC1001
S-L2980A50MC-C7
VIN
VSS
ON/OFF
VOUT
NC
AVCC5
AVCC5_2
GNDAU
GNDD
SWDVDD
TEMP2
CMDCOMN
STSCOMN
XAVCHK_ENT
CAMREF
CAMSNS
ELVREF
ELVSNS
HOME
CAMVOL
E/LVOL1
E/LVOL2
CLAMP
LOADSWR
LOADPHT
LOADSWL
INISW
E/LFWD
E/LREV
CAMFWD
CAMREV
RIPP
AMUTE
FSSW1
FSSW2
REV
XRES_M
MTOS
STOM
CD/DVD
OEIC
DCONT0
DCONT1
DCONT2
D2001
DAN202U
DBG_DET
MCKENA
IRQPWR_M
RIP_P_HEAD
ROUT
LOUT
COMPOSIT
SD0
SD1
CSYNC
<MAIN- SUB MICRO>
VCONTB
BVC33
R2087
CN2001
NM
VPP
XAVCHK_ENT
XRES_S
MONI0
MONI1
MONI2
MONI3
MONI4
MONI5
MONI6
MONI7
SOMULTI
SCKMULTI
LTMULTI
SWDVDD
SWDVDD2
C2011
Q2001
2SA2018
R2077 2R7K
R2078 10K
SVCONT
VD8
BVC33
GNDD
<HOST - MAIN>
IC2001
PE5555A
CD_DVD
CONT
OEIC
BMUTE
AMUTE
RIPP
RIP_P_HEAD
REV
INISW
/SVCONT
CAMREV
CAMFWD
HOME
CLAMP
TEMP
CAMSNS
CAMREF
ELVSNS
ELVREF
98 LOADPHT
99 VDSENS
100 VHALF
EMPH
FSSW2
FSSW1
HMCKENA
BVDD
BVSS
SPD_SW2
SPD_SW1
XUCHK_ENT
XAVCHK_ENT
CONT_B
CONT_A
LOADSWR
LOADSWL
/DEBUGIN
/TESTIN
/EPCS
AVREF0
AVSS
SD
AVREF1
CAMVOL
E/LVOL1
VPP/IC
VDD
REGC
VSS
X1
X2
/RESET
XT1
XT2
PULLDOWN
(/BSRQ) 28
(BRXEN) 27
RXD0 26
IRQPWR
WAKEUP
BSI
BSO
X2001
CSS1684
9.830MHz
VDSENS
VHALF
XRES_S
WAKEUPMG
BDATA

D2/2

D2/2 DVD CORE UNIT(2/2)

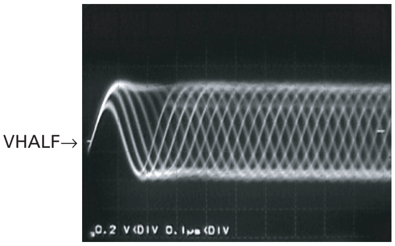

DC-DC CONVERTER
VD5
L1002
R1007 15K
R1006 82K
1003
RT
I_TH
MODE
V_FB
PGOOD
SV_IN
PV_IN
411EMS
C1008 22
C1013 22
R1003 100K (F)
R1005 1R5K (F)
R1013 10K
R1021 1R2K
C1009 22P
R1018 1M
C1010
R001
Q1002 DTC114EU
GND_D-D
GNDD
PGND
PGND_2
PGND_1
HOST I/F
CN1901
CN1902
AGND3
AGND2
AGND1
DGND6
DGND5
DGND3
DGND2
DGND1
C1910
R001
GNDA
GNDD
VD8
EF1905
L1901
DDCONF
EF1901
L1902
VD5_2
VD5_6
VD5PU_3
VD5PU_4
VD5PU
VD5
EF1907
L1907
VD5PU_2
BVC33
EF1902
L1903
SRVDD
EF1903
L1904
SRVDD_1
BVC33_1
SD2
AMUTE
VCONTB
EMPH
VDCONT
XRES_S
IRQPWR
CMDCOMN
STSCOMN
MCKENA
R1901 220
R1954 220
R1903 220
R1955 220
R1931 0R0
R1933 0R0
XRESET
HSTCMD
SLVSTS
MCKENA1
BMUTE
SPD_SW1
SPD_SW2
DTR1
VD8_3
VD8_4
VD8_5
VD5_7
40 PGND
39 PGND
38 PGND
37 DGND
36 DGND
35 DGND
34 DGND
33 DGND
32 (DTR) (WAKE UP MG)
31 VD8
30 VD8
29 VD8
28 DDCONF
27 VD5
26 VD5
25 VD5
24 VD5
23 VD5PU
22 VD5PU
21 SRVDD
20 BVC33
19 AMUTE
18 VCONTB
17 EMPH
16 VDCONT
15 XRESET
14 IRQPWR
13 HSTCMD
12 SLVSTS (CDSRQ)
11 MCKENA
10 BMUTE
9 SPD_SW1 (SCL)
8 SPD_SW2 (CDSTBY)
7 AGND
6 ANALOG ROUT
5 AGND
4 ANALOG LOUT
3 VIDEO GND
2 VIDEO OUT
1 WAKE UP MG (VGND)
A1/2 CN351
C2022 R1
IC2006
AOUTPUT
A-INPUT
A+INPUT
GND
V+
BOUTPUT
B-INPUT
B+INPUT
NJM2904V
R2080 2R7K
R2081 24K
SD0
SD1
ROUT
LOUT
COMPOSIT
WAKEUPMG
R1924 220
RO1
GNDAU2
LO1
GNDV
VIDEO
GNDAU
R1927 0R0
R1922 0R0
C2018 R1
SWDVDD
IC2003
1Y
0Y
1Z
Z-COM
0Z
INH
VEE
GND
VCC
Y-COM
X-COM
1X
0X
A
B
C
TC74HC4053AFT
<HOST - MAIN>
<HOST - SUB MICRO>
CSYNC
BSO1
R1945 0R0
R1938 0R0
STOM
R2076 0R0
R2083 220
C1017
SWDVDD
BVC33
R2094 0R0
C2001 10
R2093 10K
R2092 10K
R2040 100K
R2010 47K
R2097 100K
R2075 47K
R2043
R2042 100K
R2041 220
VCONTA
LOADSWR
LOADSWL
DBG_DET
TESTIN
IC2002
BR93L56RFVM-W
CS
SK
DI
SO
VCC
NC2
NC1
GND
R2074 4R7K
R2073 47K
R2086 0R0
R2038 100K
R2037 100K
VDCONT
DCONT2
CONT_A
/DEBUGIN
/TESTIN
/EPCS
ROMCK
ROMCS
ROMDATA
ROM1K
CRGCONT
RXD1
TXD1
E/LFWD
E/LREV
IRQPWR_M
XRES_M
(COREPWR)
(SCL)
(SDA)
EVDD
EVSS
R2084 220
MTOS
IRQPWR_M1
XRES_M1
C2007 R1
(/BSRQ) 28
(BRXEN) 27
RXD0 26
E/LVOL2
(CDSRQ)
BSRQ
BRXEN
RXD0
R2023 220 (1608)
CMDCOMN
PULLDOWN
(/BRST)
(/CDSTBY)
IRQPWR
WAKEUP
BSI
BSO
BSCK
TXD0
R2067 47K
C2020 470P
R2082 220
R2022 220 (1608)
STSCOMN
TXD0
WAKEUPMG
BDATA
R2021 100K
R2068 100K
R2096 100K
BVC33
GNDD

D2/2

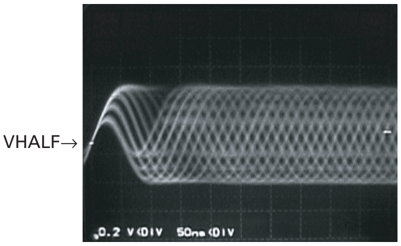
● Waveforms

Note:1. The encircled number denote measuring pointes in the circuit diagram.
2. Reference voltage VHALF : 1.65 V(TD1,FD1,CRGDRV)
: 2 V Center(ANAMONI1)
In this waveform, it is seeing on the GND standard.
Offset of 1.65 V or 2 V is put in.

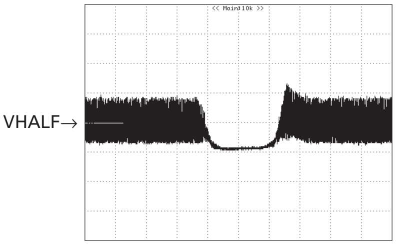
① ANAMONI1 0.2 V/div. 0.1 µs/div.
CDRF



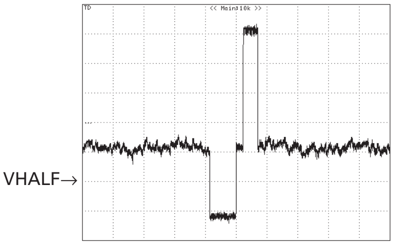
① ANAMONI1 0.2 V/div. 0.1 µs/div.
DVDRF



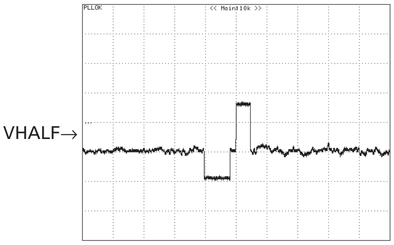
① ANAMONI1 0.5 V/div. 100 µs/div.
DVDRF(BD1 mm)



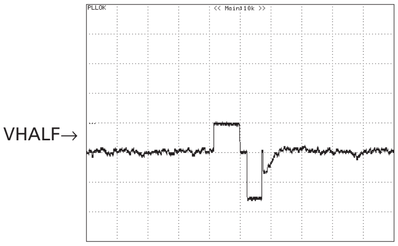
② TDY 0.2 V/div. 100 µs/div.
Interval



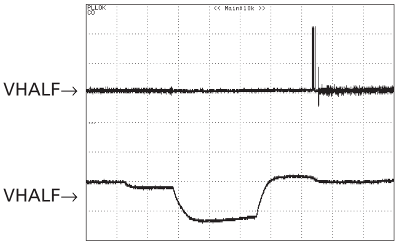
② TDY 0.5 V/div. 100 µs/div.
Interval FWD



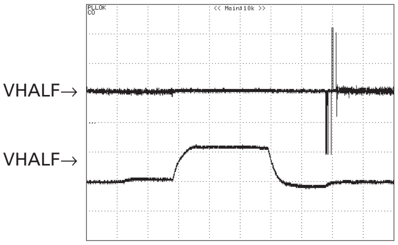
② TDY 0.5 V/div. 100 µs/div.
Interval REV



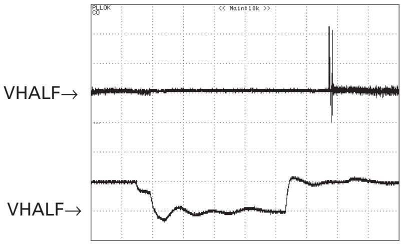
② CH1: TDY 0.5 V/div.5 ms/div.
③ CH2:(CO+)-(CO-) 2.0 V/div.5 ms/div.
Traverse501FWD



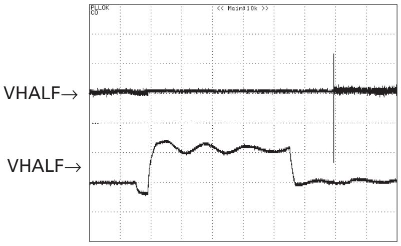
② CH1: TDY 0.5 V/div.5 ms/div.
③ CH2:(CO+)-(CO-) 2.0 V/div.5 ms/div.
Traverse501REV



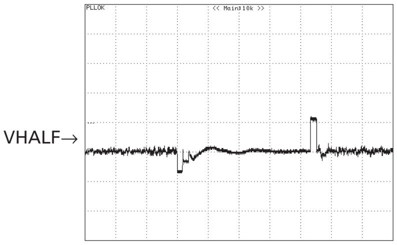
② CH1: TDY 0.5 V/div.5 ms/div.
③ CH2:(CO+)-(CO-) 2.0 V/div.5 ms/div.
Traverse 5000 FWD



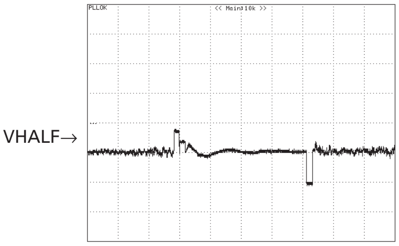
② CH1: TDY 0.5 V/div.5 ms/div.
③ CH2:(CO+)-(CO-) 2.0 V/div.5 ms/div.
Traverse5000REV



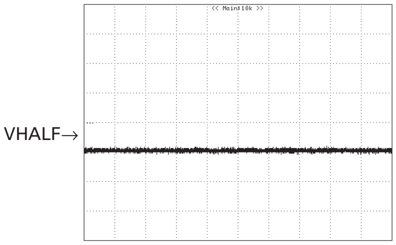
② TDY 0.5 V/div.500 µs/div.
Multi 32FWD



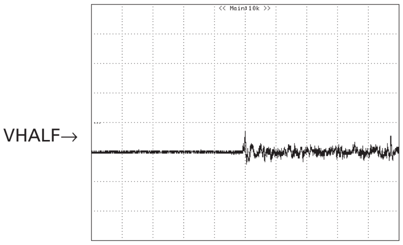
② TDY 0.5 V/div.500 µs/div.
Multi 32REV



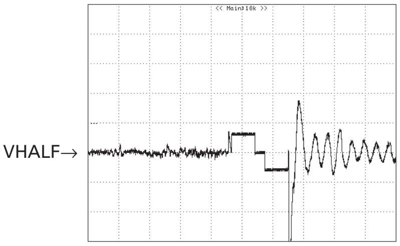
② TDY 0.5 V/div.20 ms/div.
Play TD



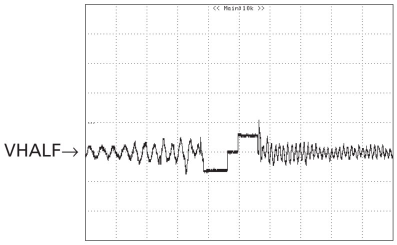
④ FDY 0.5 V/div. 1 ms/div.
Focus close



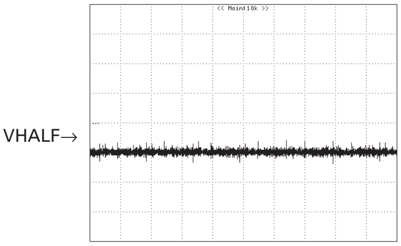
④ FDY 0.5 V/div.500 µs/div.
Focus jamp L 0 → L1



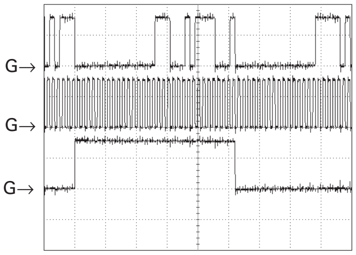
④ FDY 0.5 V/div.500 µs/div.
Focus jamp L1 → L 0



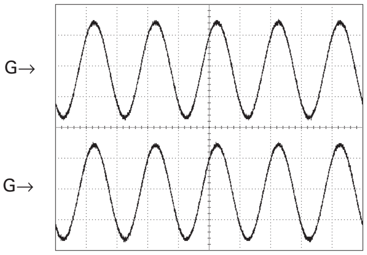
④ FDY 0.5 V/div.20 ms/div.
Play TD



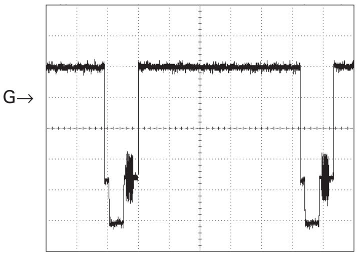
⑤ CH1: DMIX
⑥ CH2: SRCK
⑦ CH3: LRCK
2 V/div. 2 µs/div.



⑧ CH1: LO
⑨ CH2: RO
1V/div. 500 µs/div.

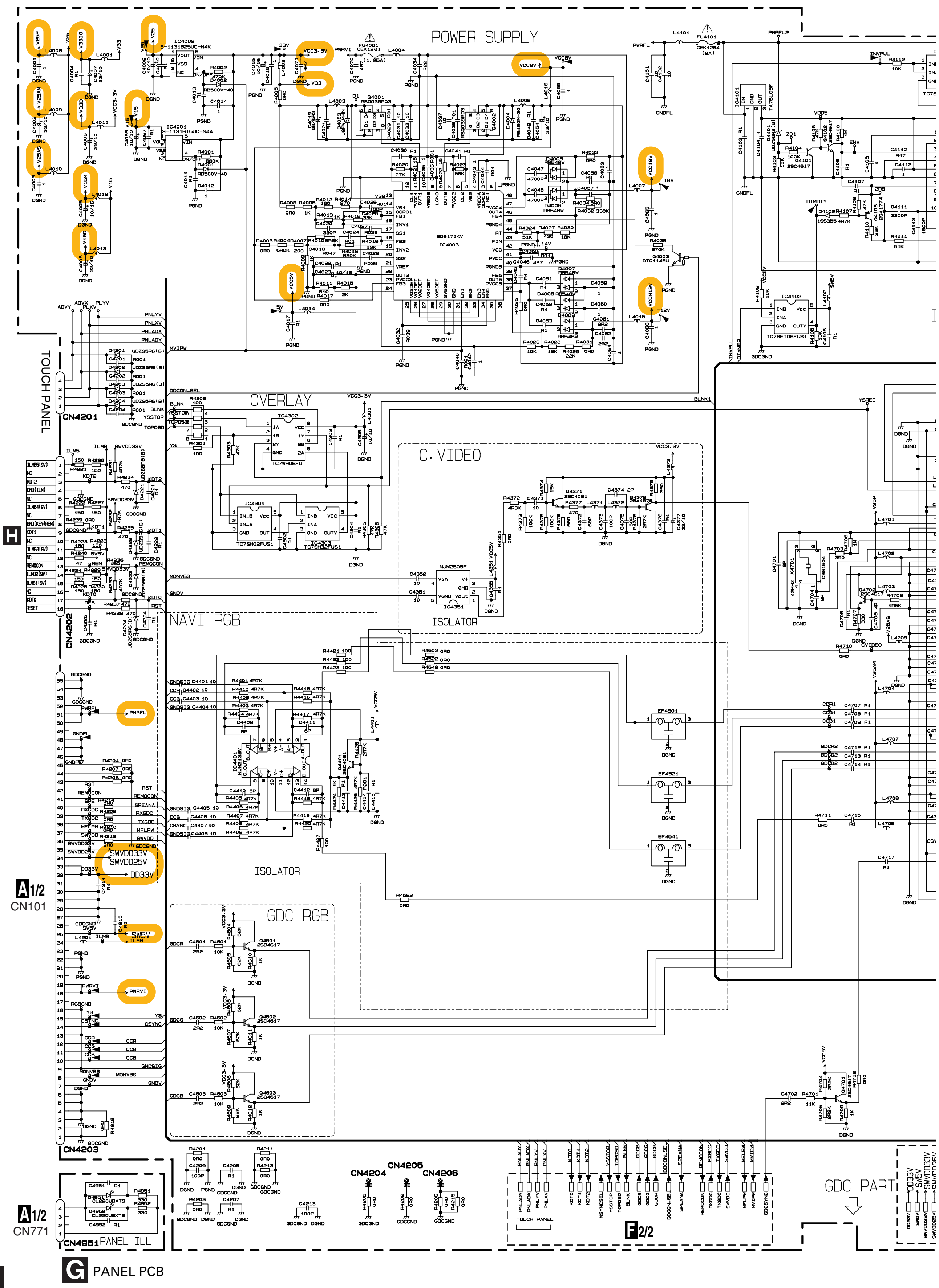


⑩ CH1: COMPO 200 mV/div. 10 µs/div.
[White 100 % output]



3.9 MONITOR PCB (MONITOR), PANEL PCB(GUIDE PAGE)

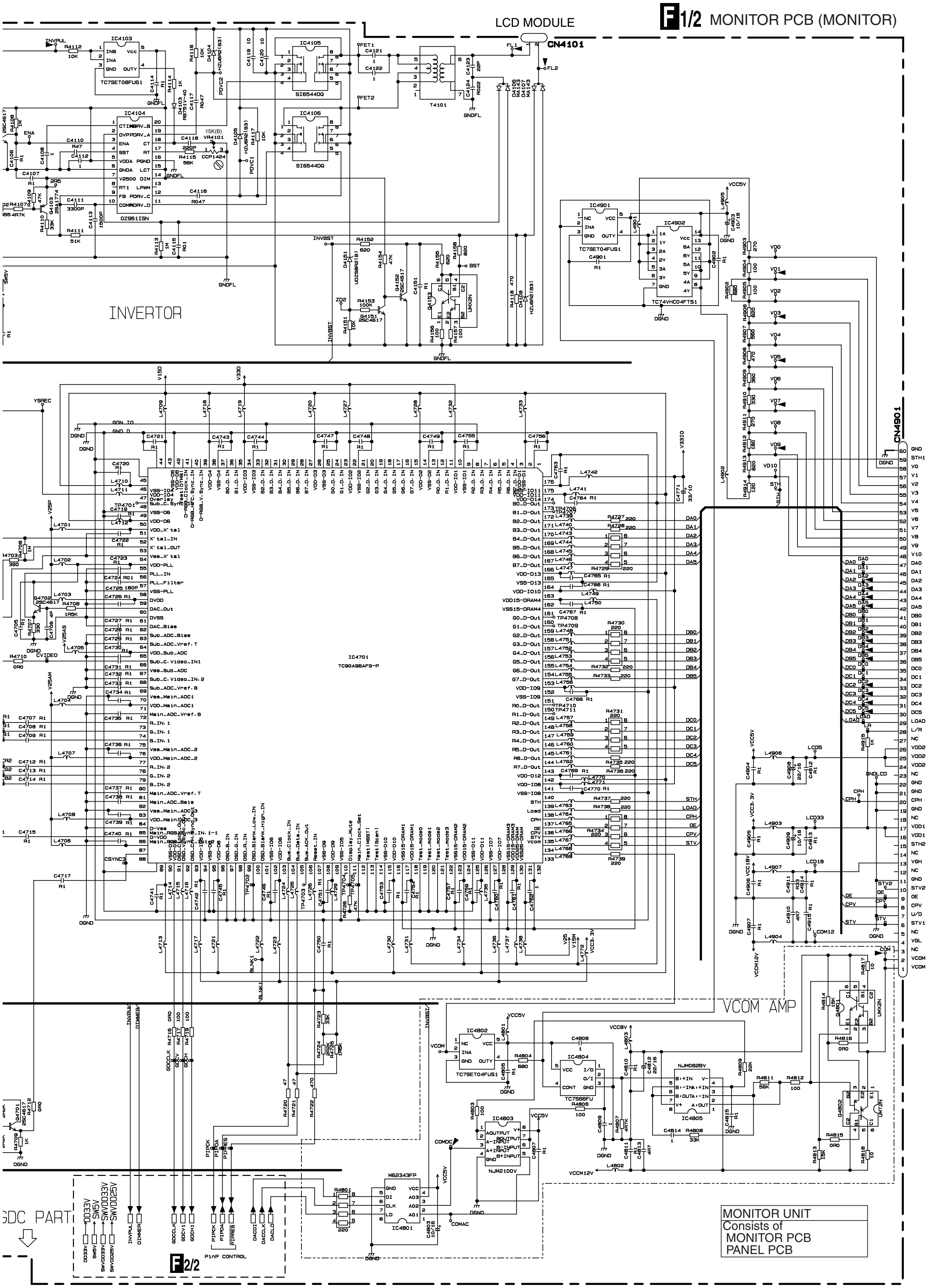
F-a 1/2


POWER SUPPLY
IC4002 S-1131B25UC-N4K
IC4001 S-1131B15UC-N4A
IC4003 BD6171KV
FU4001 CEK1281 (1.25A)
FU4101 CEK1284 (2A)
PWRVI
PWRFL
PWRFL2
VCC3.3V
VCC8V
V33
V25P
V33IO
V25AM
V33D
V25AS
V15
V15M
V15D
VCC18V
VCC12V
VCC5V
TOUCH PANEL
CN4201
CN4202
CN4203
OVERLAY
IC4302 TC7WH08FU
IC4301 TC7SH02FUS1
IC4303 TC7SH32FUS1
C. VIDEO
NJM2505F
IC4351
ISOLATOR
NAVI RGB
IC4401 NJM2137V
EF4501
EF4521
EF4541
GDC RGB
Q4601 2SC4617
Q4602 2SC4617
Q4603 2SC4617
SWVDD33V
SWVDD25V
DD33V
SW5V
H
A 1/2 CN101
A 1/2 CN771
CN4951 PANEL ILL
CN4204
CN4205
CN4206
F 2/2
GDC PART
G PANEL PCB

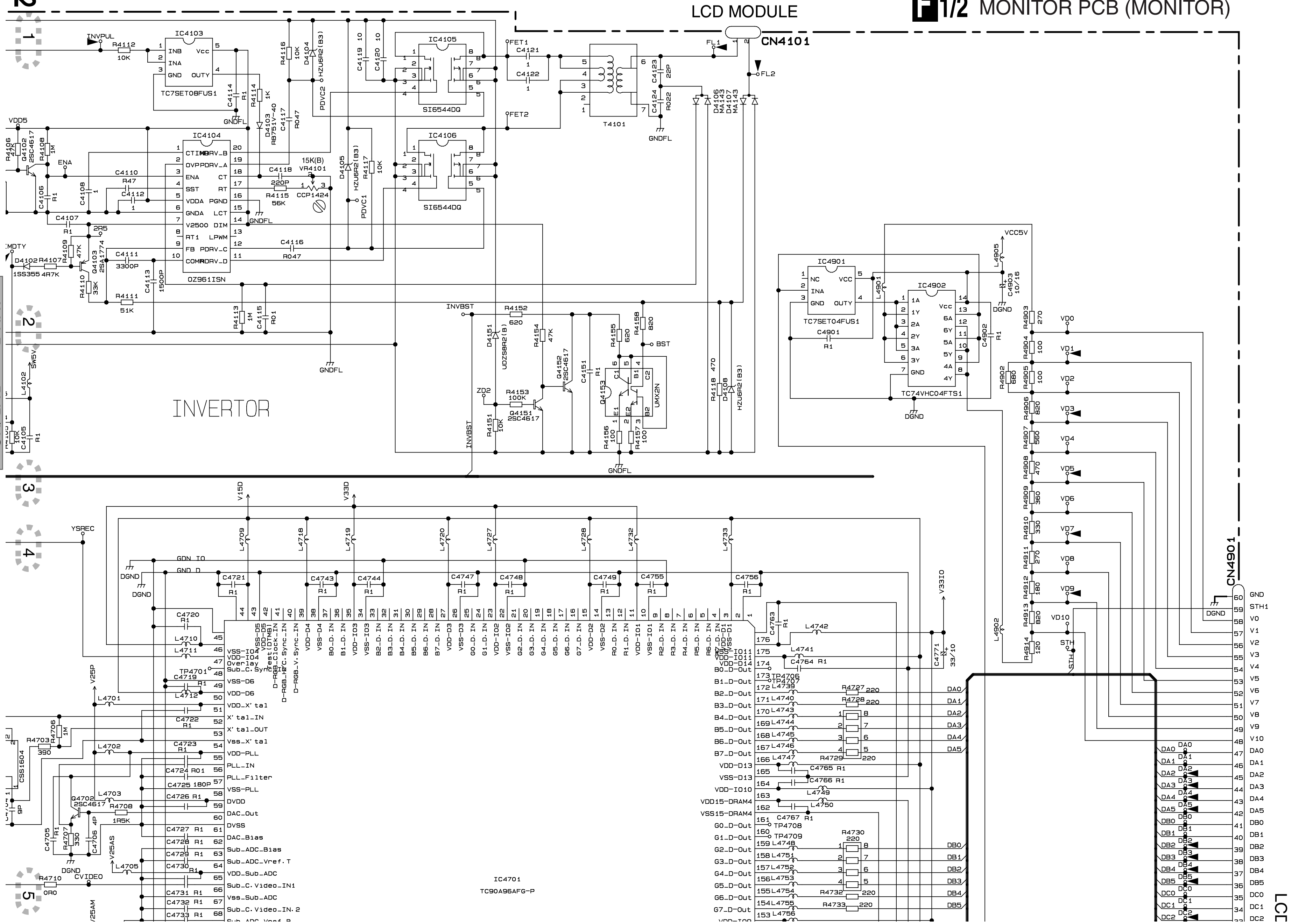
F 1/2 **G**

F-b 1/2

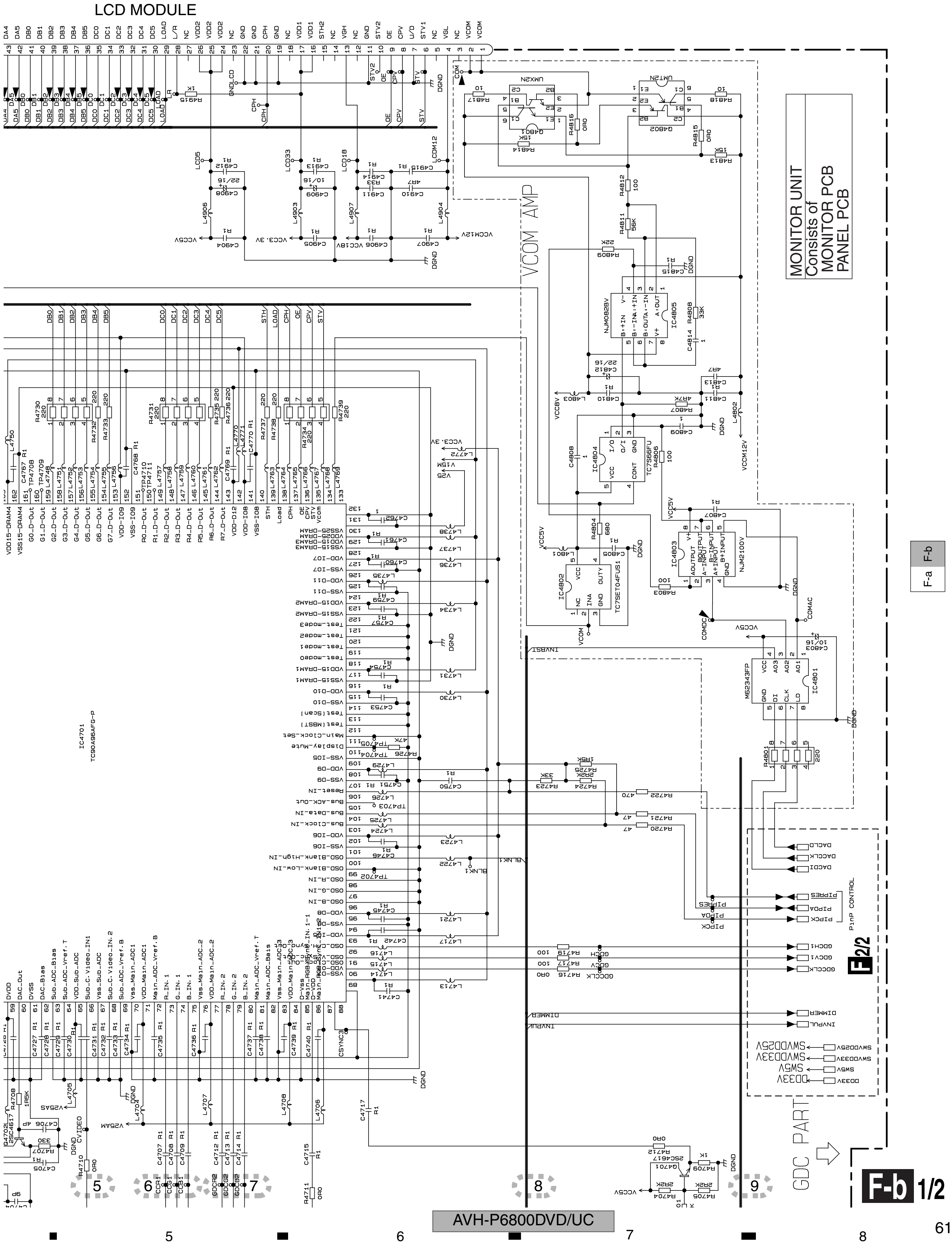
F 1/2 MONITOR PCB (MONITOR)


LCD MODULE
CN4101
INVERTOR
IC4103
TC7SET08FUS1
IC4104
OZ961ISN
IC4105
SI6544DQ
IC4106
SI6544DQ
T4101
IC4901
TC7SET04FUS1
IC4902
TC74VHC04FTS1
CN4901
LCD MODULE
IC4701
TC90A98AFG-P
VCOM AMP
IC4802
TC7SET04FUS1
IC4804
TC7S66FU
IC4805
NJM082BV
IC4803
NJM2100V
IC4801
M62343FP
GDC PART
F 2/2
PinP CONTROL
MONITOR UNIT
Consists of
MONITOR PCB
PANEL PCB

F 1/2 MONITOR PCB (MONITOR)


LCD MODULE
CN4101
INVERTOR
IC4103
TC7SET08FUS1
IC4104
OZ961ISN
IC4105
SI6544DQ
IC4106
SI6544DQ
T4101
IC4901
TC7SET04FUS1
IC4902
TC74VHC04FTS1
CN4901
IC4701
TC90A96AFG-P
LCD

F-a F-b


LCD MODULE
MONITOR UNIT
Consists of
MONITOR PCB
PANEL PCB
VCOM AMP
GDC PART
F-a
F-b
F 2/2
F-b 1/2
IC4701
TC90A96AFG-P
IC4801
M62343FP
IC4802
TC7SET04FUS1
IC4803
NJM2100V
IC4804
TC7S66FU
IC4805
NJM082BV
Q4801
UMX2N
Q4802
UMT2N
Q4701
2SC4617
Q4702
2SC4617
VCC5V
VCC3.3V
VCC18V
VCCM12V
VCC8V
V25M
V15M
V25AS
V25AM
DGND
COMDC
COMAC
INVBSI
INVPUL
DIMMER
BLNK1
CVIDEO
CSYNC3
PIPRES
PIPDA
PIPCK
PinP CONTROL
GDCH1
GDCV1
GDCCLK
DACLD
DACCLK
DACDI
SWDD25V
SWDD33V
SW5V
DD33V

A
B
C
D
E
F

A

F-b 1/2

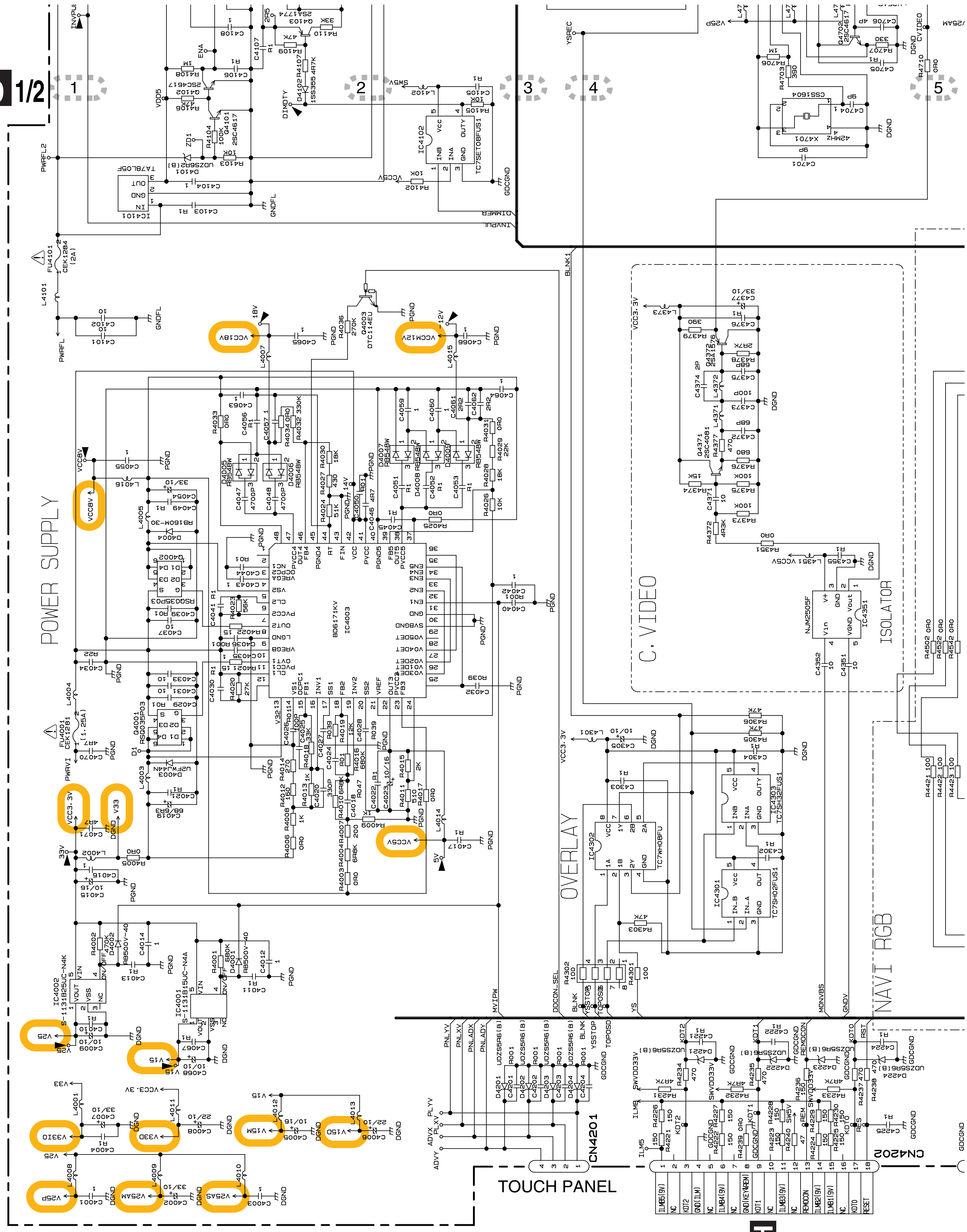
B

C

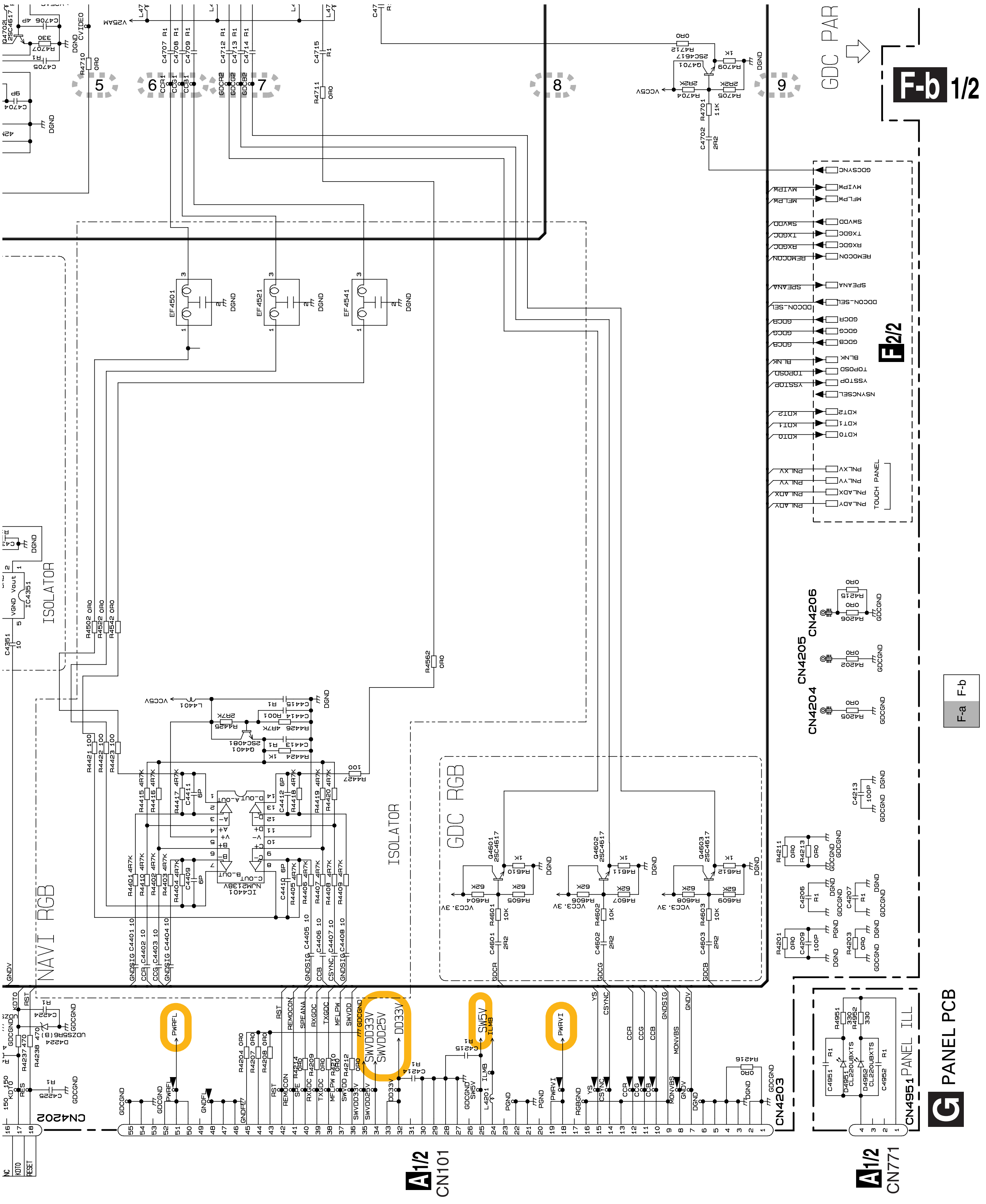
D

E

F


POWER SUPPLY
C.VIDEO
ISOLATOR
OVERLAY
NAVI RGB
TOUCH PANEL
CN4201
CN4202
IC4003
BD6171KV
IC4101
TA78L05F
IC4102
TC7SET08FUS1
IC4351
NJM2505F
IC4302
TC7WH08FU
IC4301
TC7SH02FUS1
IC4303
TC7SH32FUS1
IC4001
S-1131B15UC-N4A
IC4002
S-1131B25UC-N4K
FU4101
CEK1284
(2A)
FU4001
CEK1281
(1.25A)
X4701
42MHz
CSS1604
VCC18V
VCCM12V
VCCBV
VCC3.3V
V33
VCC5V
V25
V15
V33IO
V33D
V15M
V15D
V25P
V25AM
V25AS
PWRFL
PWRFL2
INVPUL
DIMMER
YSREC
BLNK1
GDCGND
PGND
DGND
GNDFL
ILMB5(9V)
NC
KDT2
GND(ILM)
ILMB4(9V)
GND(KEY&REM)
KDT1
ILMB3(9V)
REMOCON
ILMB2(9V)
ILMB1(9V)
KDT0
RESET
H

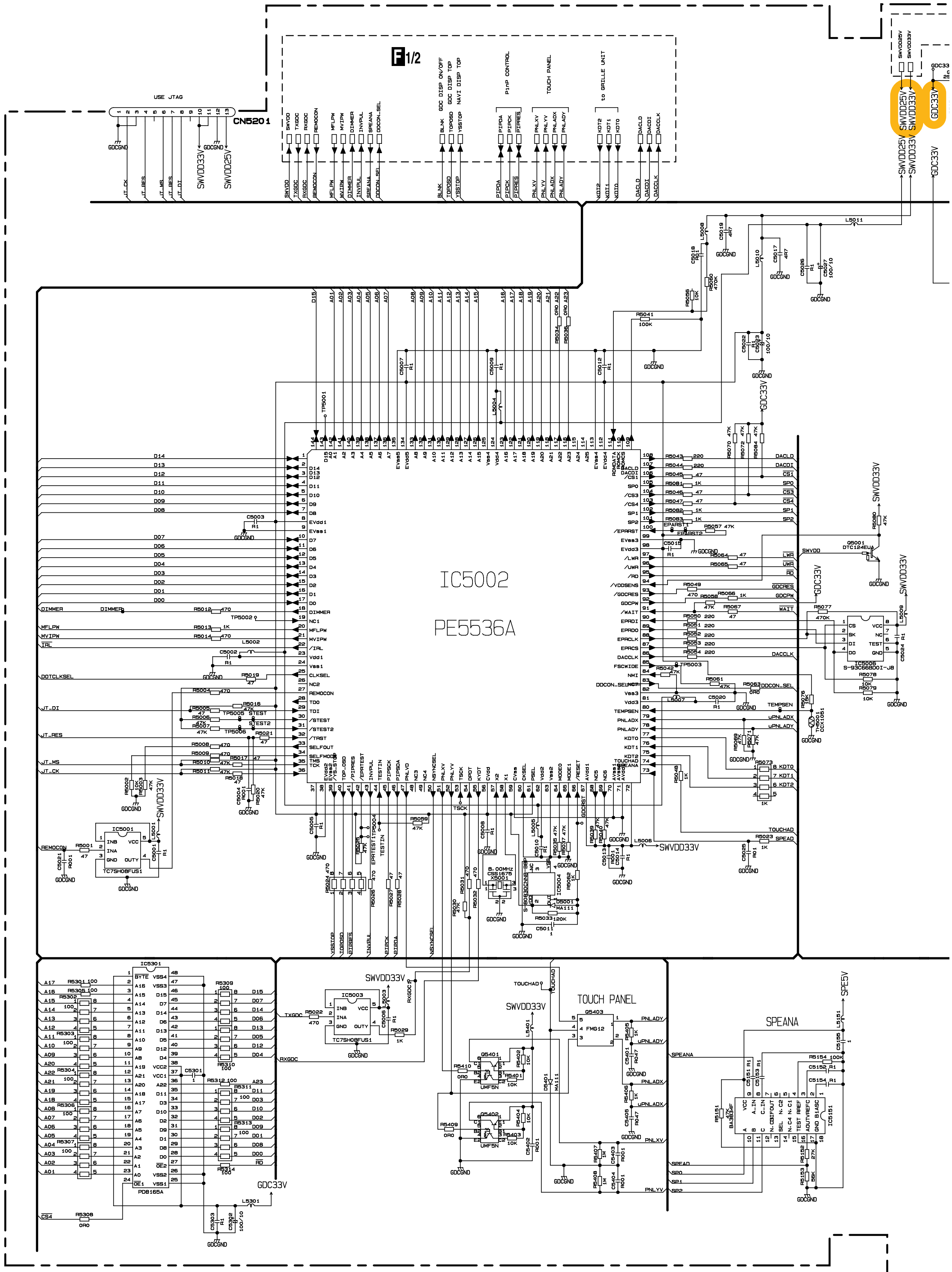
F-a 1/2


GDC PAR
F-b 1/2
F 2/2
TOUCH PANEL
NAVI RGB
ISOLATOR
GDC RGB
IC4401 NJM2138V
IC4351
EF4501
EF4521
EF4541
CN4202
CN4203
CN4204
CN4205
CN4206
CN4951
G PANEL PCB
PANEL ILL
A 1/2 CN101
A 1/2 CN771
F-a
F-b
PWRFL
PWRVI
SW5V
SWVDD33V
SWVDD25V
DD33V

A
B
C
D
E
F

3.10 MONITOR PCB (GDC)(GUIDE PAGE)

F-a 2/2

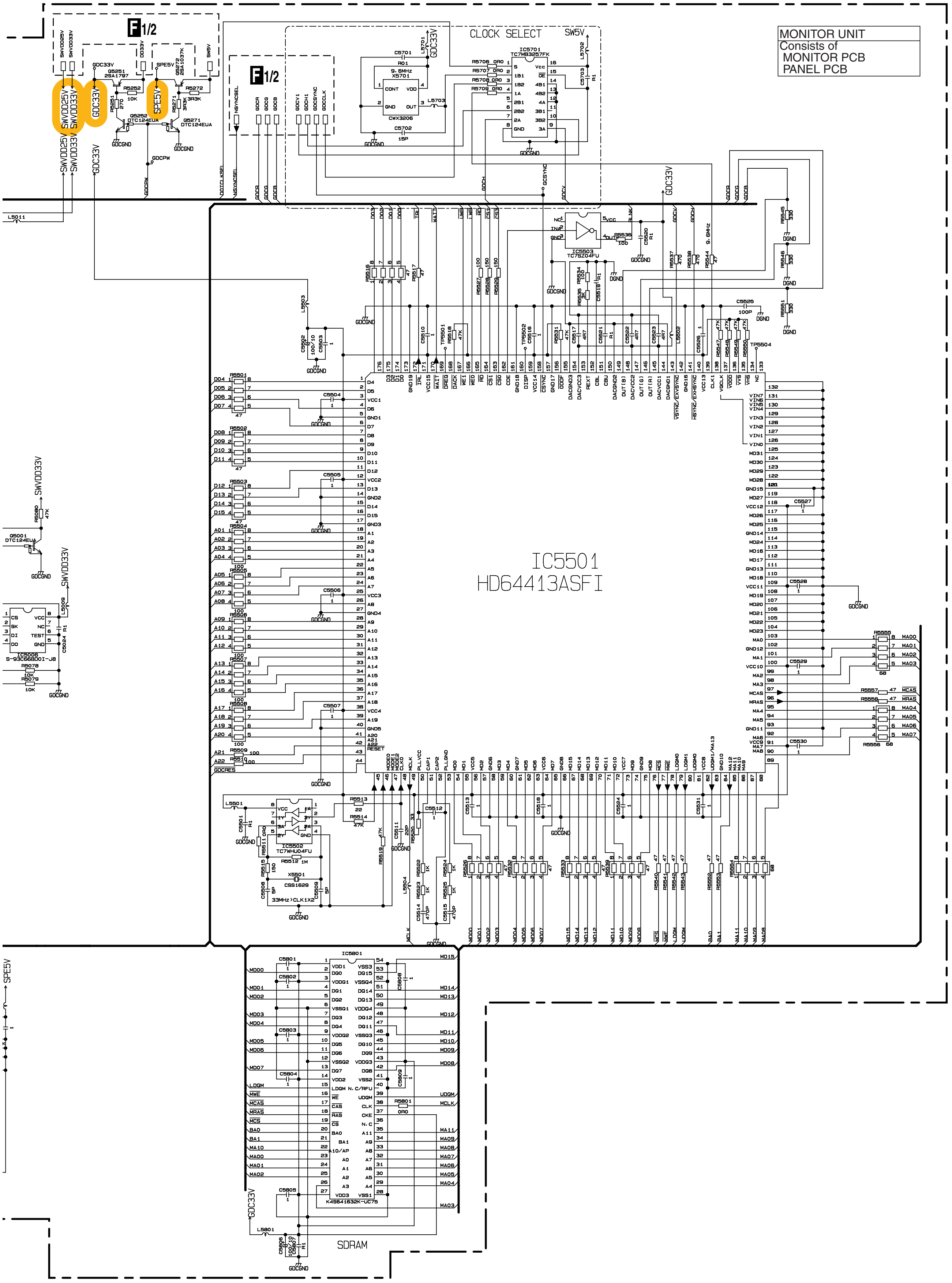

F 1/2
USE JTAG
CN5201
GDCGND
SWVDD33V
SWVDD25V
JT_CK
JT_RES
JT_MS
JT_DI
SWVDD
TXGDC
RXGDC
REMOCON
MFLPW
MVIPW
DIMMER
INVPUL
SPEANA
DOCON_SEL
GDC DISP ON/OFF
GDC DISP TOP
NAVI DISP TOP
BLNK
TOPOSD
VSSTOP
PinP CONTROL
PIPDA
PIPCK
PIPRES
TOUCH PANEL
PNLXV
PNLYV
PNLADX
PNLADY
to GRILLE UNIT
KDT2
KDT1
KDT0
DACLD
DACDI
DACCLK
GDC33V
L5011
IC5002
PE5536A
IC5001
TC7SH08FUS1
IC5003
TC7SH08FUS1
IC5006
S-93C66BD0I-J8
Q5001
DTC124EUA
TH5001
CCX1051
X5001
8.00MHz
CSS1675
IC5004
S-80930CNMC-G9
D5001
MA111
IC5301
PD8165A
TOUCH PANEL
Q5403
FMG12
Q5401
UMF5N
Q5402
UMF5N
D5401
MA111
SPEANA
IC5151
BA3834F
SPE5V
L5301
TOUCHAD
SPEAD
SP0
SP1
SP2

F 2/2

F-b 2/2

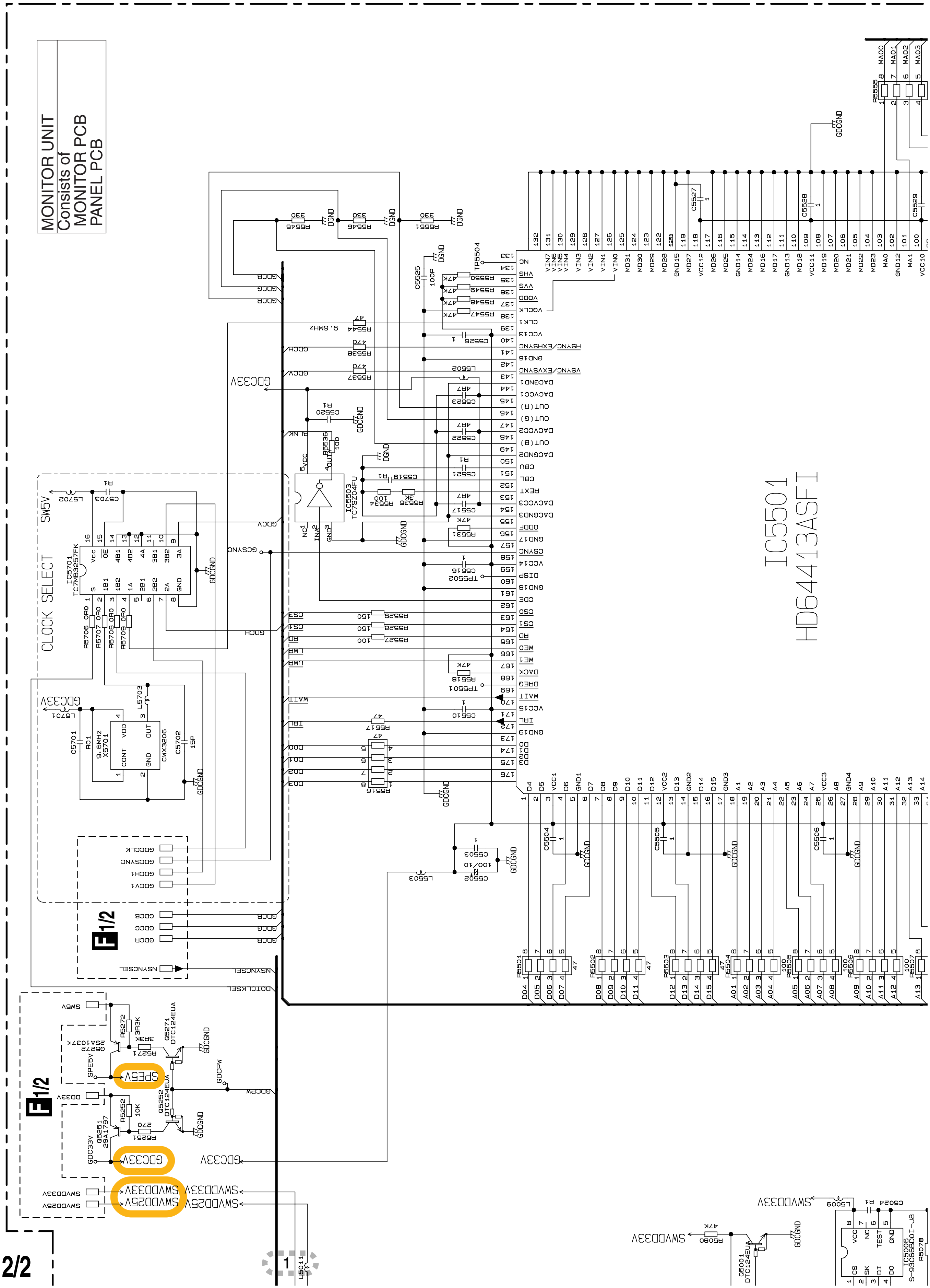
F 2/2 MONITOR PCB (GDC)

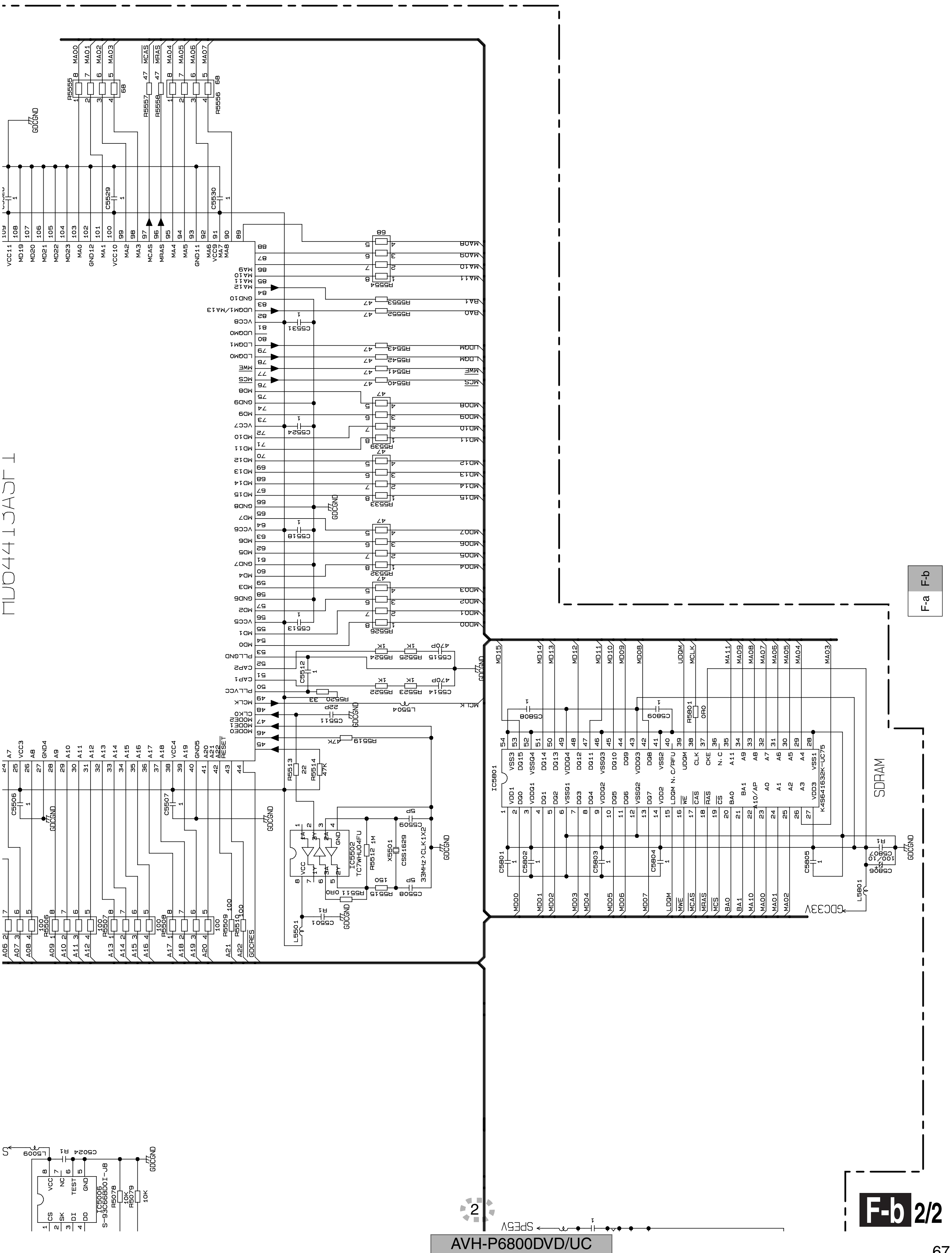
MONITOR UNIT
Consists of
MONITOR PCB
PANEL PCB

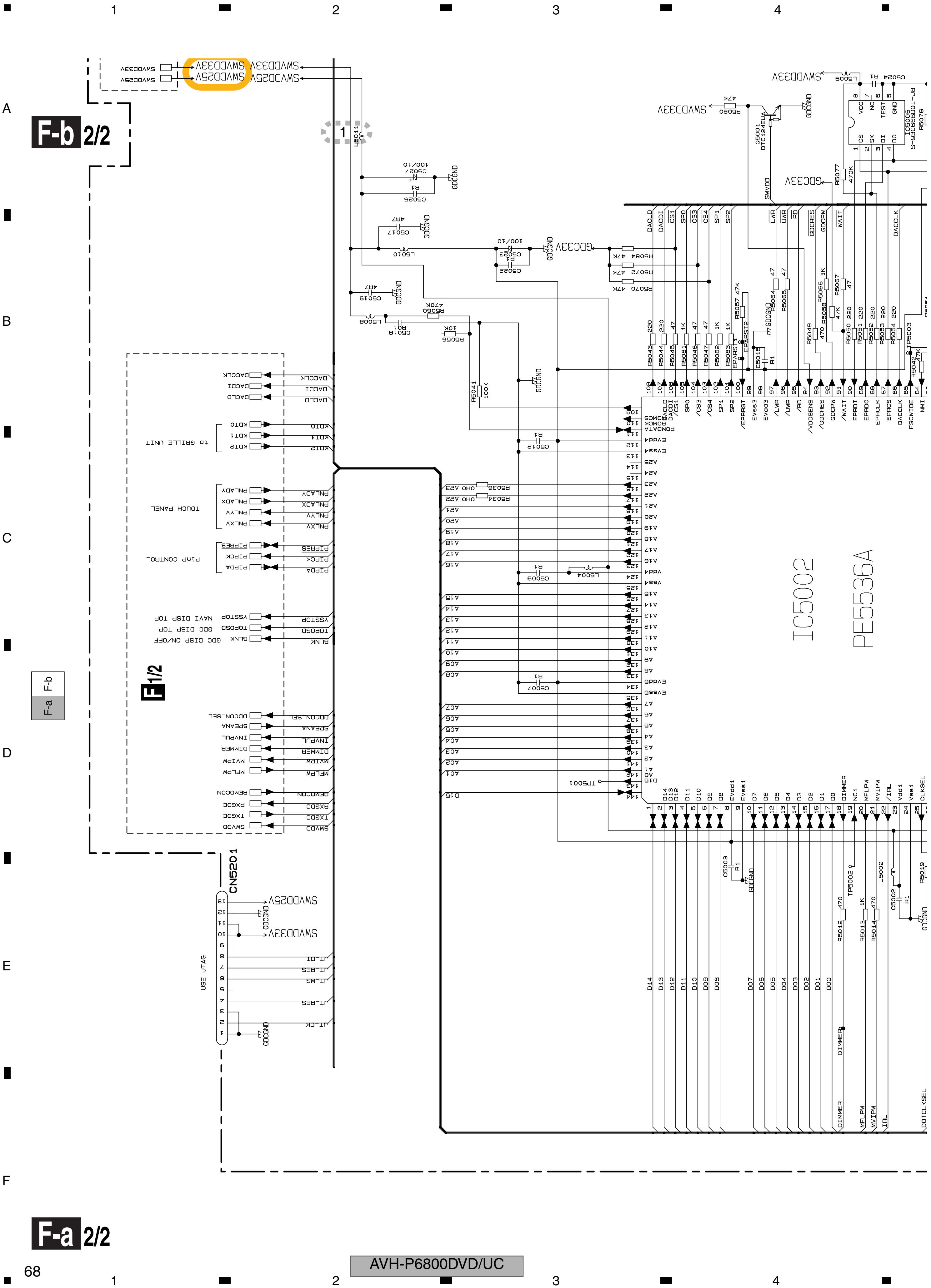

F 1/2
SWVDD25V
SWVDD33V
GDC33V
SPE5V
SW5V
CLOCK SELECT
IC5701
TC7MB3257FK
X5701
9.6MHz
CWX3206
IC5503
TC7SZ04FU
IC5501
HD64413ASFI
IC5502
TC7WHU04FU
X5501
CSS1629
33MHz>CLK1X2
IC5006
S-93C66BDI-J8
Q5001
DTC124EUA
Q5251
2SA1797
Q5252
DTC124EUA
Q5271
DTC124EUA
Q5272
2SA1037K
IC5801
K4S641632K-UC75
SDRAM
GDCGND
DGND

F 2/2

F 2/2 MONITOR PCB (GDC)


MONITOR UNIT
Consists of
MONITOR PCB
PANEL PCB
IC5501
HD64413ASFI
IC5701
TC7MB3257FK
CLOCK SELECT
SW5V
IC5503
TC7SZ04FU
X5701
9.6MHz
CWX3206
IC5005
S-93C66DI-JB
Q5001
DTC124EUA
Q5271
DTC124EUA
Q5272
2SA1037K
Q5251
2SA1797
Q5252
DTC124EUA
F 1/2
GDCCLK
GDCSYNC
GDCH1
GDCV1
GDCB
GDCG
GDCR
NSYNCSEL
DOTCLKSEL
GDC33V
SWDD33V
SWDD25V
SPE5V
DD33V
GDCPW
GDCGND
DGND
HSYNC/EXHSYNC
VSYNC/EXVSYNC
CSYNC
VCLK
CLK1


A
B
C
D
E
F
SDRAM
IC5801
K4S641632K-UC75
IC5502
TC7WHU04FU
X5501
CSS1629
33MHz>CLK1X2
IC5006
S-93C66ADI-J8
GDC33V
SPE5V
GDCGND
GDCRES
F-a
F-b


F-b 2/2
F-a 2/2
SWVDD33V
SWVDD25V
L5011
C5027 100/10
C5026 R1
C5017 4R7
L5010
C5023 100/10
C5022 R1
GDC33V
GDCGND
C5019 4R7
L5008
C5018 R01
R5060 470K
R5056 10K
R5041 100K
R5084 47K
R5072 47K
R5070 47K
Q5001 DTC124EUA
R5080 47K
L5009
C5024 R1
IC5005 S-93C66BD0I-J8
R5078
R5077 470K
CS SK DI DO VCC NC TEST GND
SWVDD
DACLD DACDI CS1 SP0 CS3 CS4 SP1 SP2 LWR UWR RD GDCRES GDCPW WAIT DACCLK
R5043 220
R5044 220
R5045 47
R5081 1K
R5046 47
R5047 47
R5082 1K
R5083 1K
R5057 47K
EPARST
EPARST2
C5015 R1
R5064 47
R5065 47
R5049 470
R5058 47K
R5066 1K
R5067 47
R5050 220
R5051 220
R5052 220
R5053 220
R5054 220
TP5003
R5042 47K
DACCLK DACDI DACLD
KDT0 KDT1 KDT2
to GRILLE UNIT
PNLADY PNLADX PNLYV PNLXV
TOUCH PANEL
PIPRES PIPCK PIPDA
PinP CONTROL
YSSTOP
NAVI DISP TOP
TOPOSD
GDC DISP TOP
BLNK
GDC DISP ON/OFF
F 1/2
DDCON_SEL SPEANA INVPUL DIMMER MVIPW MFLPW
REMOCON RXGDC TXGDC SWVDD
C5012 R1
R5036 ORO A23
R5034 ORO A22
A21 A20 A19 A18 A17 A16
C5009 R1
L5004
A15 A14 A13 A12 A11 A10 A09 A08
C5007 R1
A07 A06 A05 A04 A03 A02 A01
TP5001
D15
IC5002
PE5536A
CN5201
USE JTAG
JT DI
JT RES
JT MS
JT RES
JT CK
C5003 R1
TP5002
L5002
C5002 R1
R5012 470
R5013 1K
R5014 470
R5019
D14 D13 D12 D11 D10 D09 D08 D07 D06 D05 D04 D03 D02 D01 D00
DIMMER
MFLPW
MVIPW
IRL
DOTCLKSEL
1 2 3 4
A B C D E F
F-b
F-a

A

F-b 2/2

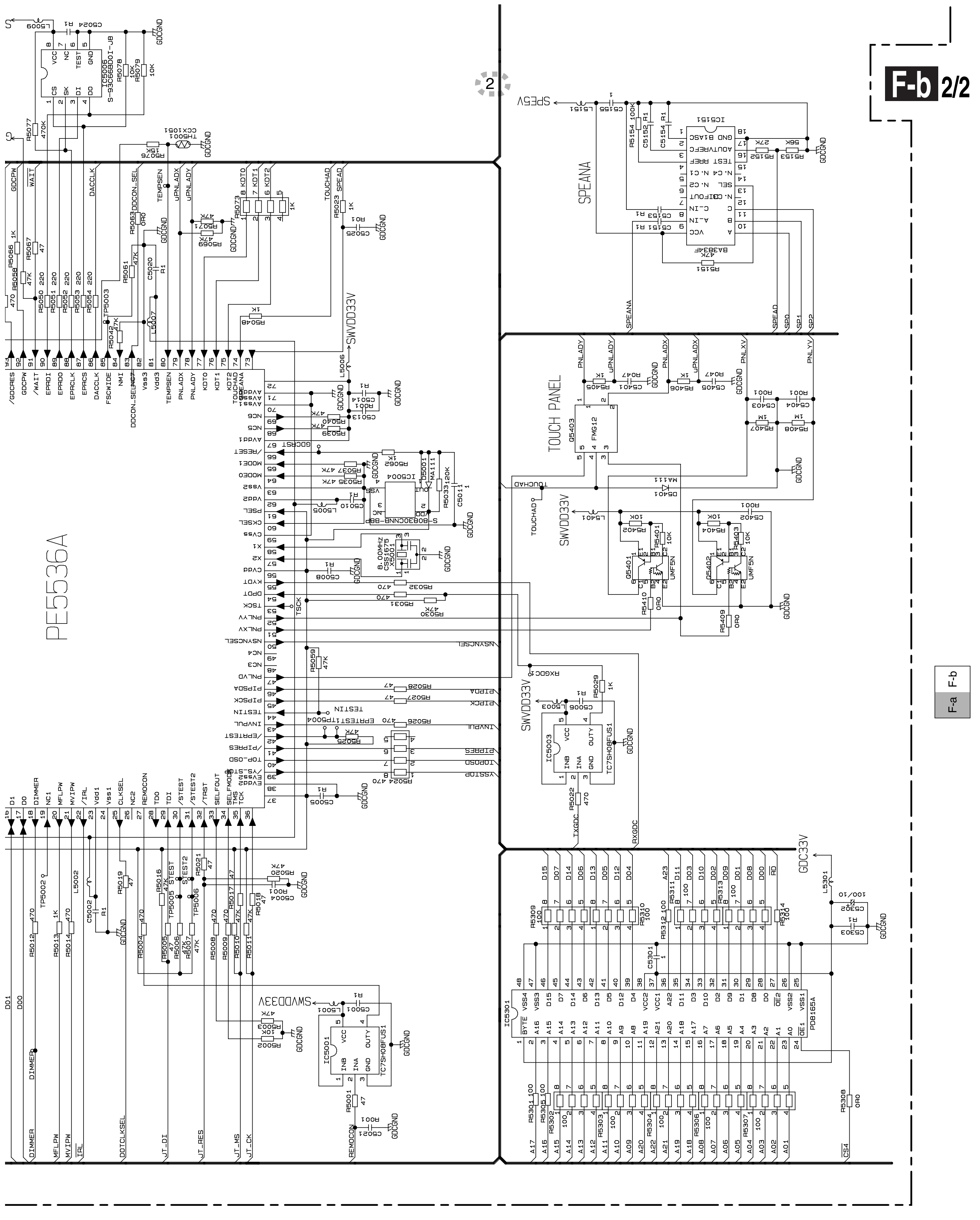
B

C

D

E

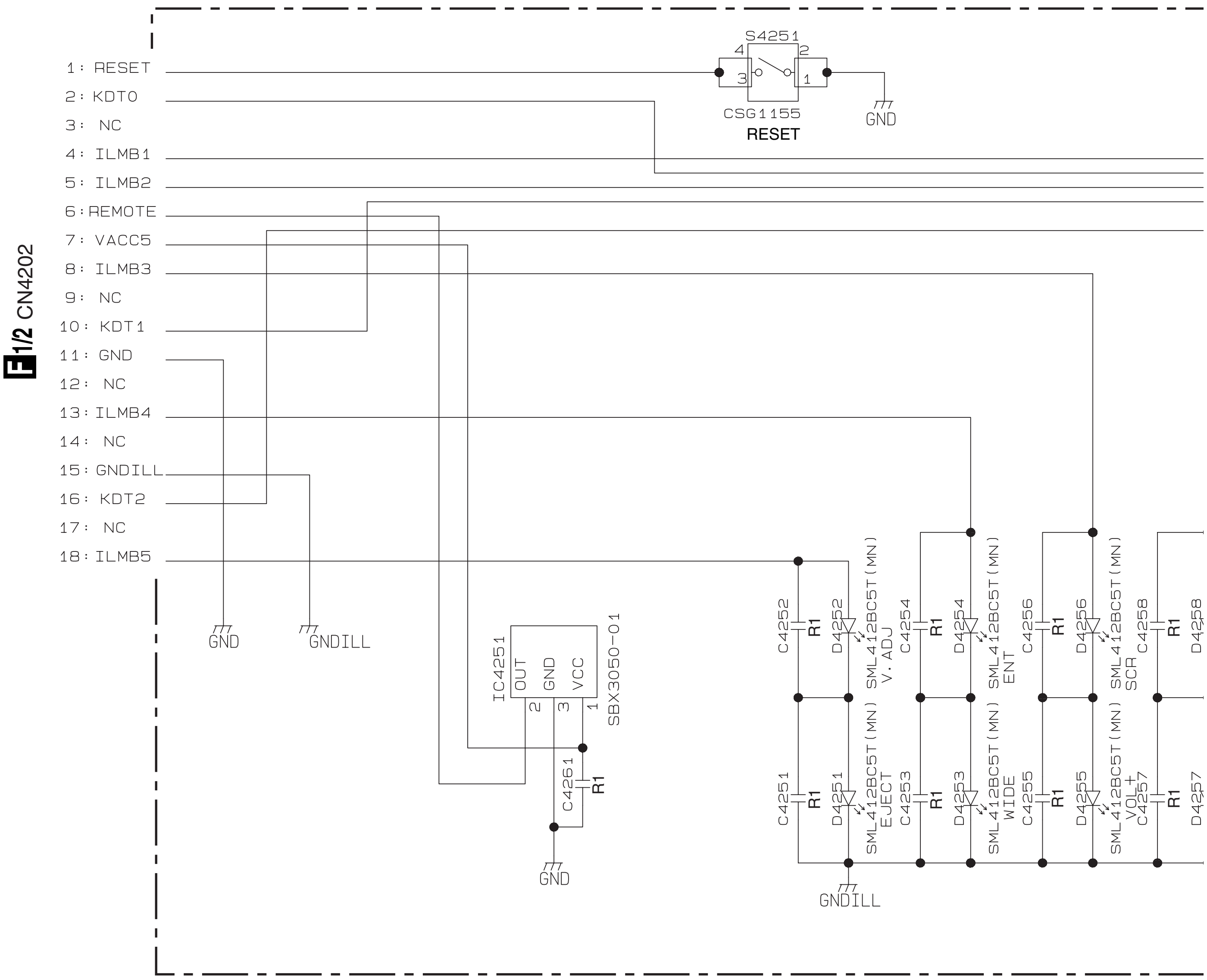
F


PE5536A
IC5006 S-93C56BDOI-J8
SPEANA
IC5151 BA3834F
TOUCH PANEL
Q5403 FMG12
Q5401 UMF5N
Q5402 UMF5N
IC5004 S-80830CNNB-B8P
X5001 CSS1675 8.00MHz
IC5003 TC7SH08FUS1
IC5001 TC7SH08FUS1
IC5301 PD8165A
SWVDD33V
SPE5V
GDC33V
GDCGND
TOUCHAD
SPEAD
SP0
SP1
SP2
PNLYV
PNLXV
PNLADX
PNLADY
NSYNCSEL
PIPDA
PIPCK
TESTIN
INVPUL
PIPRES
TOPOSD
VSSTOP
TXGDC
RXGDC
REMOCON
DIMMER
MFLPW
MVIPW
IRL
DOTCLKSEL
JT_DI
JT_RES
JT_MS
JT_CK
D01
D00
CS4
2

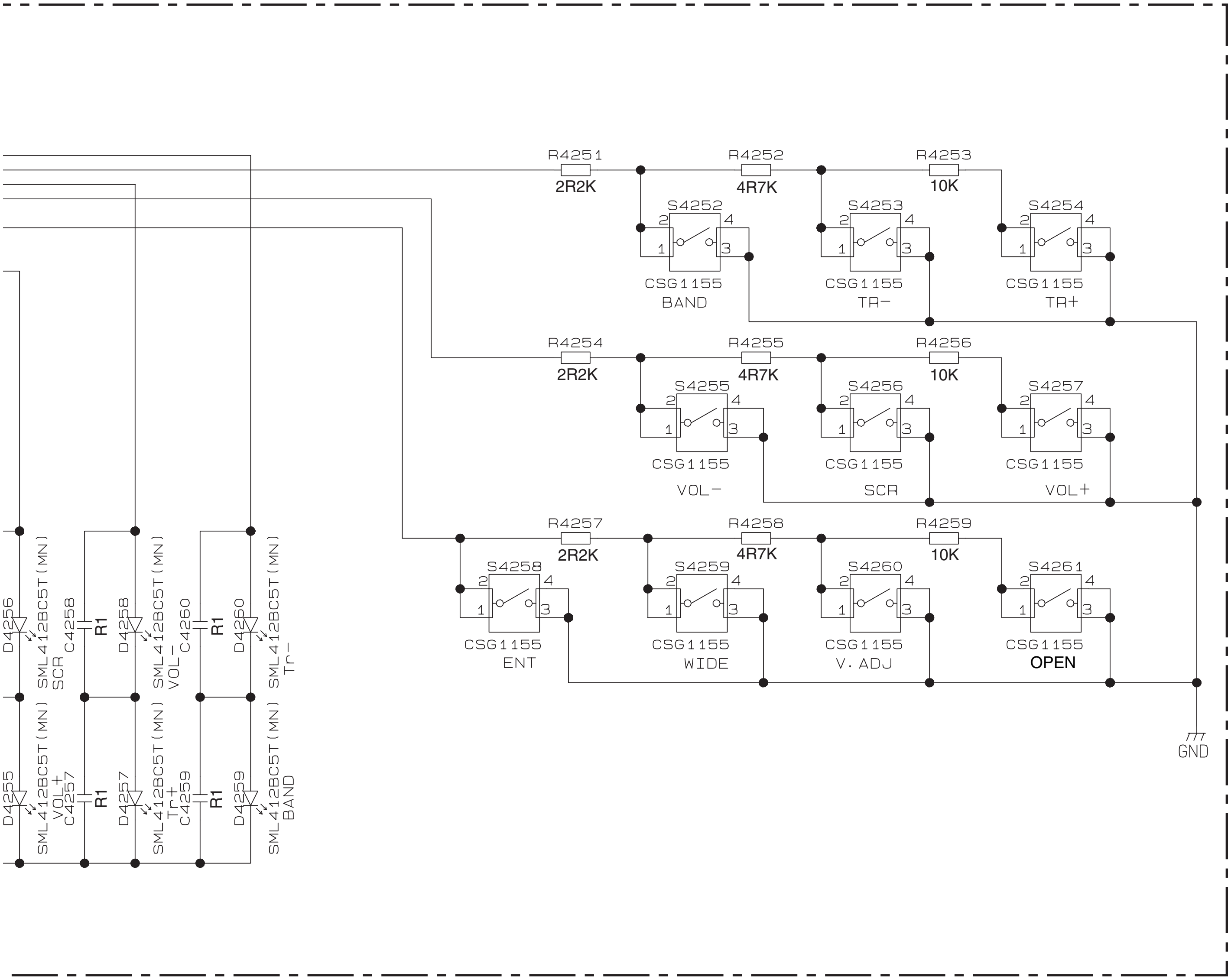
F-a
F-b

F-a 2/2

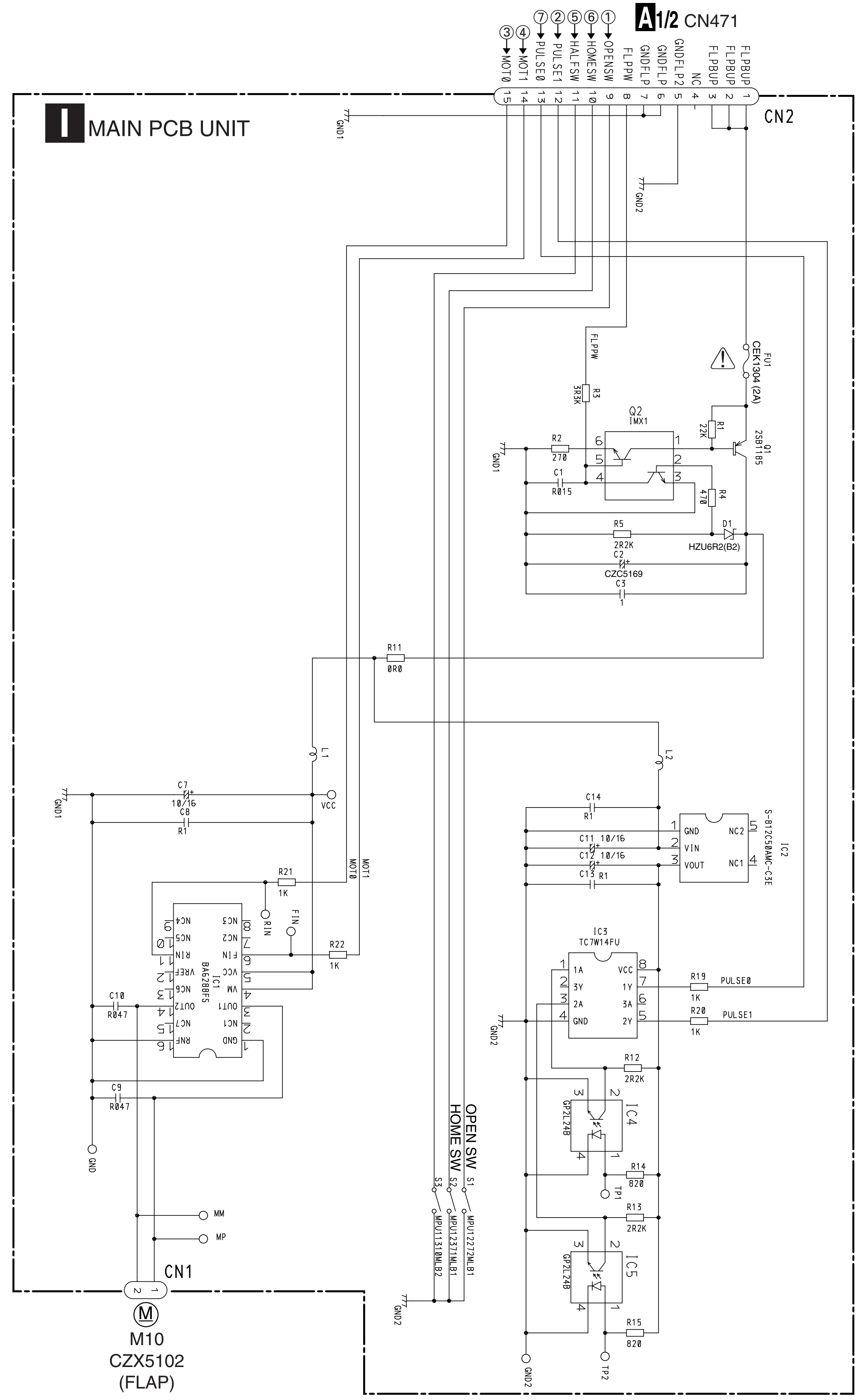
3.11 KEY UNIT


F 1/2 CN4202
1: RESET
2: KDT0
3: NC
4: ILMB1
5: ILMB2
6: REMOTE
7: VACC5
8: ILMB3
9: NC
10: KDT1
11: GND
12: NC
13: ILMB4
14: NC
15: GNDILL
16: KDT2
17: NC
18: ILMB5
S4251
4
2
3
1
CSG1155
RESET
GND
GND
GNDILL
IC4251
OUT
GND
VCC
2
3
1
SBX3050-01
C4261
R1
GND
C4252
R1
D4252
SML412BC5T(MN)
V.ADJ
C4254
R1
D4254
SML412BC5T(MN)
ENT
C4256
R1
D4256
SML412BC5T(MN)
SCR
C4258
R1
D4258
C4251
R1
D4251
SML412BC5T(MN)
EJECT
C4253
R1
D4253
SML412BC5T(MN)
WIDE
C4255
R1
D4255
SML412BC5T(MN)
VOL+
C4257
R1
D4257
GNDILL

H KEY UNIT


R4251
2R2K
R4252
4R7K
R4253
10K
S4252
CSG1155
BAND
S4253
CSG1155
TR−
S4254
CSG1155
TR+
R4254
2R2K
R4255
4R7K
R4256
10K
S4255
CSG1155
VOL−
S4256
CSG1155
SCR
S4257
CSG1155
VOL+
R4257
2R2K
R4258
4R7K
R4259
10K
S4258
CSG1155
ENT
S4259
CSG1155
WIDE
S4260
CSG1155
V. ADJ
S4261
CSG1155
OPEN
GND
D4256
SML412BC5T(MN)
SCR
C4258
R1
D4258
SML412BC5T(MN)
VOL−
C4260
R1
D4260
SML412BC5T(MN)
Tr−
D4255
SML412BC5T(MN)
VOL+
C4257
R1
D4257
SML412BC5T(MN)
Tr+
C4259
R1
D4259
SML412BC5T(MN)
BAND

3.12 MAIN PCB UNIT

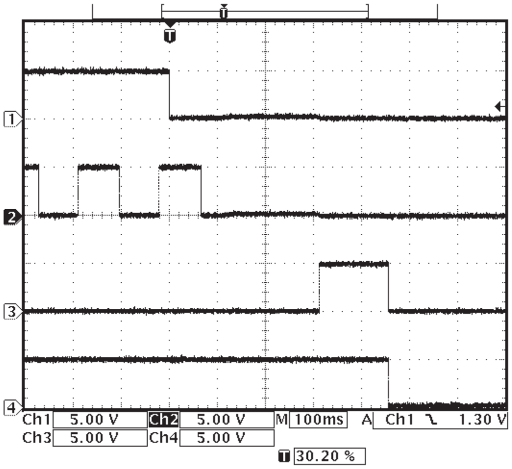

A1/2 CN471
③ MOT0
④ MOT1
⑦ PULSE0
② PULSE1
⑤ HALFSW
⑥ HOMESW
① OPENSW
FLPPW
GNDFLP
GNDFLP
GNDFLP2
NC
FLPBUP
FLPBUP
FLPBUP
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
CN2
I MAIN PCB UNIT
GND1
GND2
FLPPW
R3 3R3K
FU1 CEK1304 (2A)
Q2 IMX1
R1 22K
Q1 2SB1185
R2 270
C1 R015
R4 470
R5 2R2K
D1 HZU6R2(B2)
C2 CZC5169
C3 1
R11 0R0
L1
L2
C7 10/16
C8 R1
VCC
C14 R1
C11 10/16
C12 10/16
C13 R1
IC2 S-812C50AMC-C3E
GND VIN VOUT NC2 NC1
R21 1K
MOT0
MOT1
RIN
FIN
R22 1K
IC1 BA6208FS
NC4 NC5 RIN VREF NG6 OUT2 NC7 RNF
NC3 NC2 FIN VCC VM OUT1 NC1 GND
C10 R047
C9 R047
GND
IC3 TC7W14FU
1A 3Y 2A GND VCC 1Y 3A 2Y
R19 1K PULSE0
R20 1K PULSE1
R12 2R2K
IC4 GP2L24B
R14 820
TP1
R13 2R2K
IC5 GP2L24B
R15 820
TP2
OPEN SW
HOME SW
S1 S2 S3
MPU12272MLB1
MPU12371MLB1
MPU11310MLB2
MM
MP
CN1
M10 CZX5102 (FLAP)

Waveforms

The encircled number denote measuring pointes in the circuit diagram.

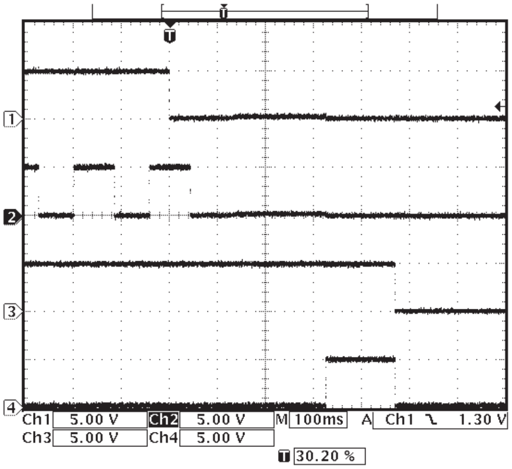
• FULL OPEN

① CH1 : OPENSW ③ CH3 : MOT0
② CH2 : PULSE1 ④ CH4 : MOT1



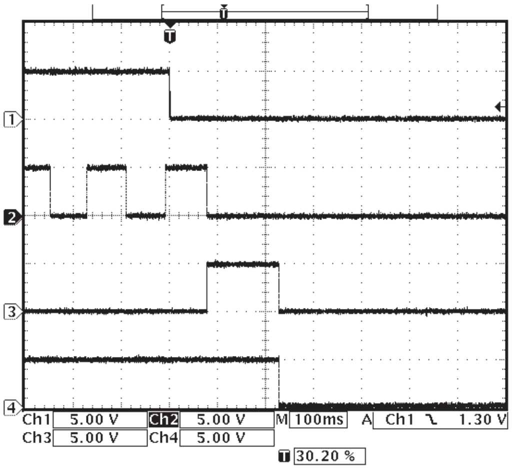
• CLOSE

⑥ CH1 : HOMESW ③ CH3 : MOT0
② CH2 : PULSE1 ④ CH4 : MOT1



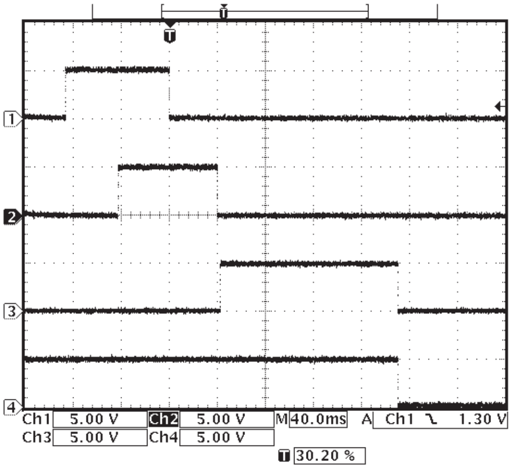
• HALF OPEN

⑤ CH1 : HALFSW ③ CH3 : MOT0
② CH2 : PULSE1 ④ CH4 : MOT1



• ANGLE

⑦ CH1 : PULSE0 ③ CH3 : MOT0
② CH2 : PULSE1 ④ CH4 : MOT1

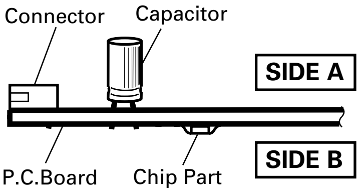


4. PCB CONNECTION DIAGRAM

4.1 MOTHER PCB

NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams

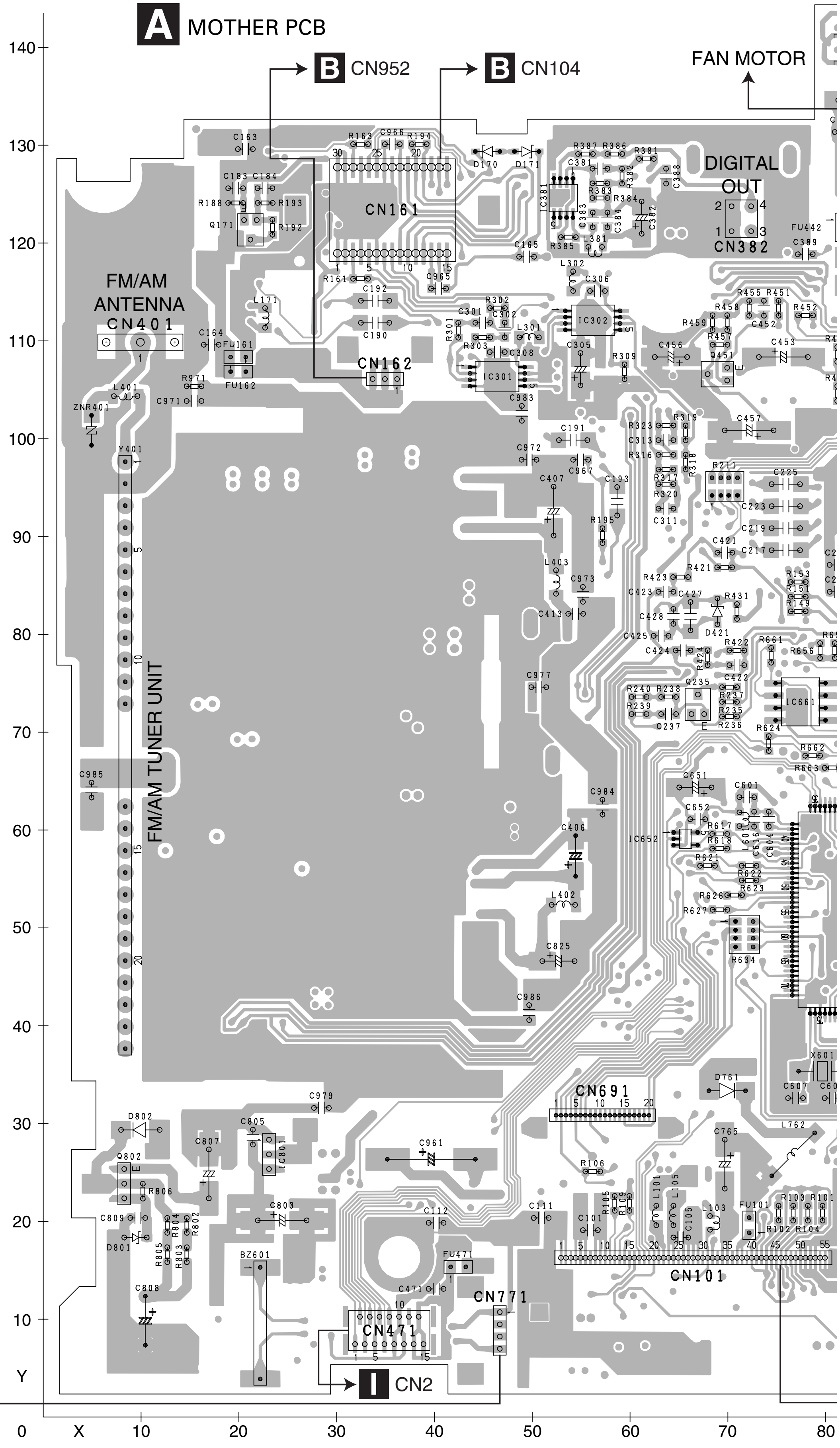


Connector
Capacitor
SIDE A
P.C.Board
Chip Part
SIDE B

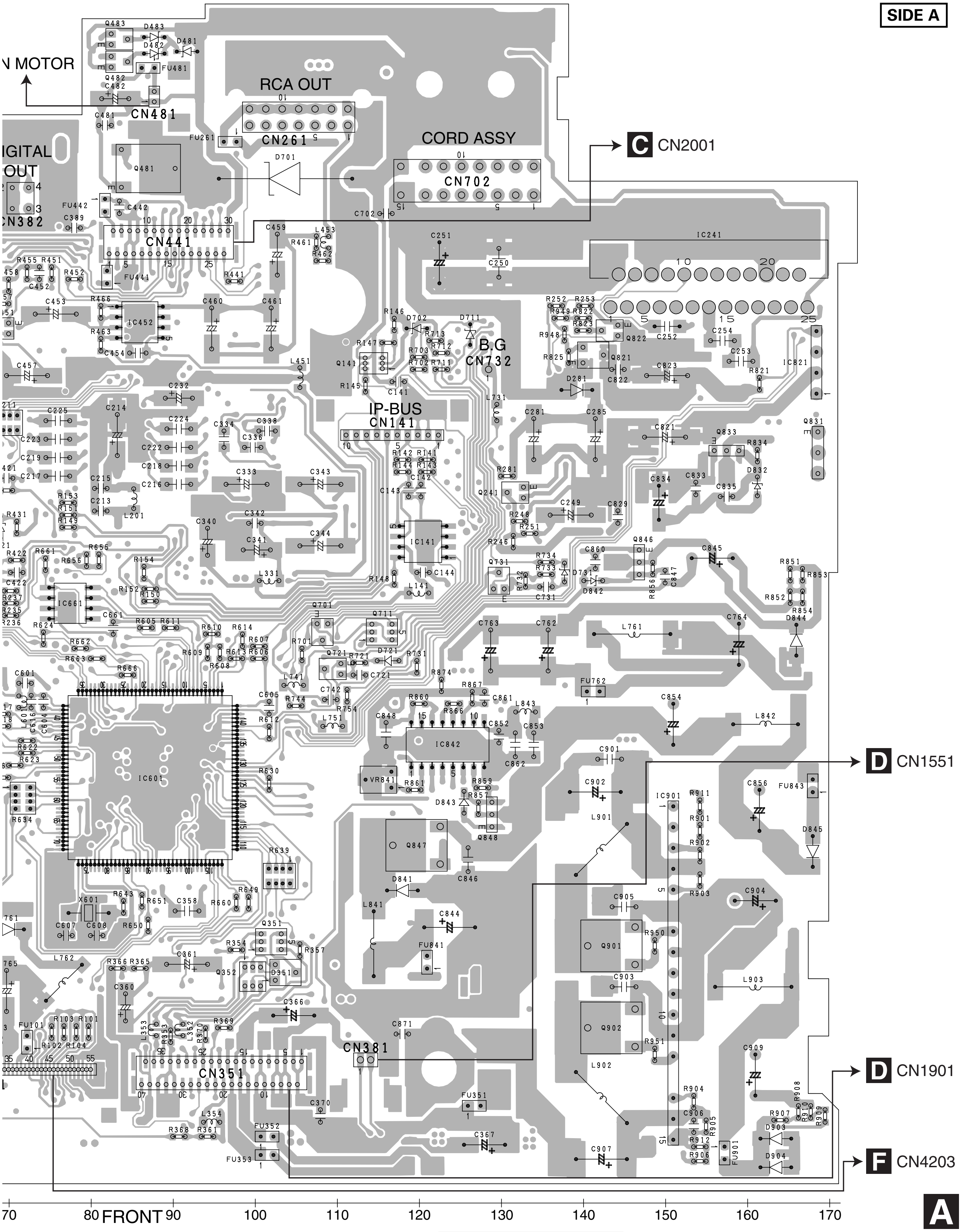
FU 101 (A,72,20)
FU 161 (A,20,108)
FU 162 (A,20,107)
FU 261 (A,97,129)
FU 351 (A,127,12)

FU 352 (A,101,8)
FU 353 (A,101,6)
FU 441 (A,82,113)
FU 442 (A,82,122)
FU 471 (A,42,15)

FU 481 (A,87,138)
FU 762 (A,141,62)
FU 841 (A,121,29)
FU 843 (A,168,51)
FU 901 (A,157,6)

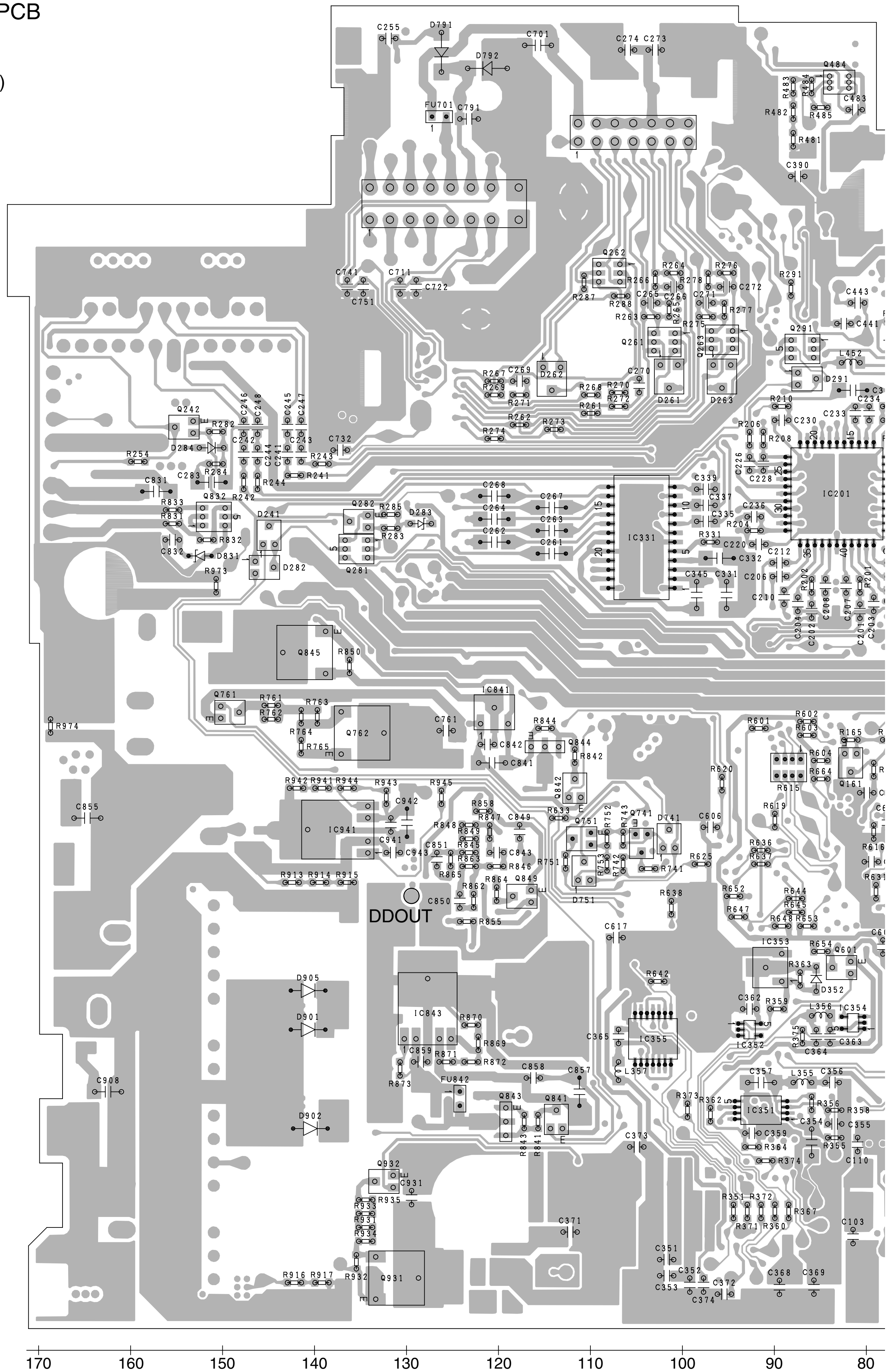


A MOTHER PCB
B CN952
B CN104
FAN MOTOR
DIGITAL OUT
CN382
CN161
CN162
FM/AM ANTENNA
CN401
FM/AM TUNER UNIT
IC301
IC302
IC381
IC652
IC661
CN691
CN101
CN471
CN771
I CN2
G CN4951
BZ601
140
130
120
110
100
90
80
70
60
50
40
30
20
10
Y
0
X
10
20
30
40
50
60
70
80


SIDE A
N MOTOR
CN481
RCA OUT
CN261
CORD ASSY
CN702
C CN2001
IGITAL
OUT
CN382
CN441
IC452
IC241
B.G
CN732
IP-BUS
CN141
IC141
IC661
IC821
IC601
IC842
VR841
D CN1551
IC901
Q847
Q901
Q902
L901
L902
L903
CN381
CN351
D CN1901
F CN4203
X601
Q481
D701
70
80
FRONT
90
100
110
120
130
140
150
160
170
A

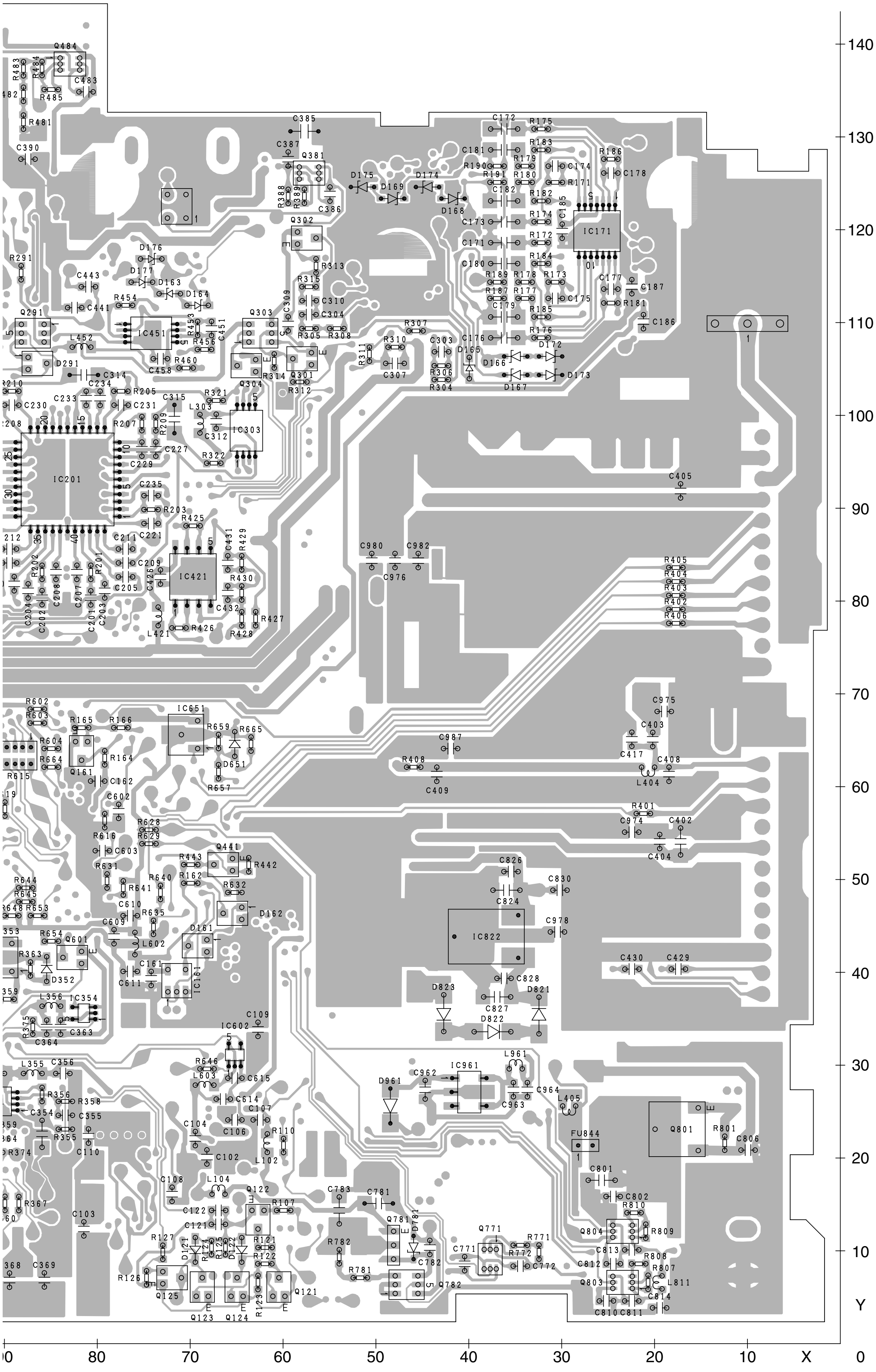
A MOTHER PCB

FU 701 (B,126,134)
FU 842 (B,124,27)
FU 844 (B,27,21)


C255
D791
D792
C701
C274
C273
Q484
R483
R484
C483
R482
R485
R481
C390
FU701
C791
1
C741
C751
C711
C722
Q262
R266
R264
R276
R278
C272
R287
R288
C265
C266
C271
R277
R263
R265
R275
R291
C443
C441
Q261
Q263
Q291
L452
R287
C269
D262
C270
D261
D263
D291
R269
R271
R268
R270
R272
R261
R210
C234
C233
C230
R206
R208
R262
R273
R274
Q242
C246
C248
C245
C247
R282
D284
C242
C244
C241
C240
C243
C732
R243
R241
R254
R284
C283
R244
C831
R242
R833
R831
Q832
R832
C832
D831
R973
D241
D282
Q282
R285
D283
R283
Q281
C268
C264
C262
C267
C263
C261
IC331
C339
C337
C335
C226
C228
IC201
C236
R204
R331
C220
C212
C332
C345
C331
C206
C210
R202
C208
C207
R201
C204
C202
C201
C203
Q845
R850
Q761
R761
R762
R763
R764
R765
Q762
IC841
C761
R844
Q844
C842
R842
C841
R974
R601
R602
R603
R165
R604
R664
R615
Q161
R620
R942
R941
R944
R943
R945
C942
IC941
C941
C943
R858
R847
C849
R848
R849
R845
C851
R863
R846
R865
C843
Q842
R633
Q751
R752
Q741
R743
D741
R751
R753
R742
R741
D751
C606
R619
R625
R636
R637
R616
R631
C855
R913
R914
R915
R864
R862
Q849
C850
DDOUT
R855
R638
R652
R647
R644
R645
R648
R653
C617
IC353
R654
Q601
R363
D352
R642
C362
R359
L356
IC354
D905
D901
IC843
R870
R869
C365
IC355
IC352
R375
C364
C363
C859
R871
R872
R873
L357
C858
C857
FU842
C357
L355
C356
C908
Q843
Q841
R843
R841
R373
R362
IC351
R356
R358
C354
C355
D902
C373
C359
R364
R355
C110
R374
Q932
C931
R935
R933
R931
R934
R351
R372
R367
R371
R360
C371
C103
C351
R916
R917
R932
Q931
C352
C372
C353
C374
C368
C369
170
160
150
140
130
120
110
100
90
80

SIDE B

A

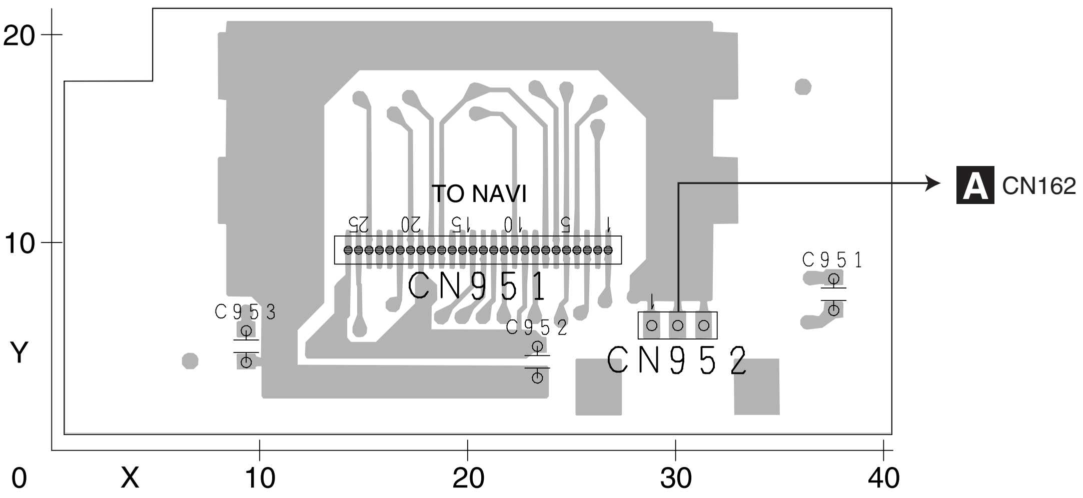

Q484
R483
R484
C483
R482
R485
R481
C390
C385
C387
Q381
R388
R389
C386
Q302
D175
D169
D174
D168
C172
R175
C181
R183
R190
R179
C174
R186
R191
R180
C178
C182
R171
R182
C185
IC171
C173
R174
C171
R172
C180
R184
R189
R178
R173
C177
C187
R187
R177
C179
R185
C175
R181
C176
R176
C186
D165
D172
D166
D173
D167
R307
R310
C303
R311
C307
R306
R304
D176
D177
D163
D164
R291
C443
C441
R454
Q291
IC451
R453
C451
R456
R460
C458
Q303
C309
C310
C304
R313
R315
R305
R308
Q301
Q304
R314
R312
L452
D291
C314
R210
C234
R205
C233
C230
C231
C315
R321
L303
R209
C312
IC303
R322
R208
R207
C227
C229
IC201
C235
R203
R425
C221
C211
R212
R202
C209
R201
C208
C207
C205
C204
C202
C201
C203
C431
R429
IC421
C425
R430
C432
R427
L421
R426
R428
C405
C980
C982
C976
R405
R404
R403
R402
R406
R602
R603
R165
R166
IC651
R659
R665
R604
R664
R164
D651
Q161
C162
R615
R657
R619
C602
R628
R629
R616
C603
Q441
R443
R442
R631
R162
R644
R640
R641
R632
R645
R648
R653
C610
R635
D162
C609
D161
R353
R654
Q601
L602
R363
C161
IC161
D352
C611
R359
L356
IC354
R375
C364
C363
C109
IC602
L355
C356
R646
L603
C615
R356
R358
C614
C107
C354
C355
C104
C106
R110
R359
R355
R364
R374
C110
C102
L102
C108
L104
Q122
C122
R107
C121
C103
R127
D121
R124
R125
D122
R121
R122
R123
R367
R360
R368
C369
R126
Q125
Q123
Q124
Q121
C975
C403
C987
C417
C408
R408
L404
C409
R401
C974
C402
C404
C826
C830
C824
C978
IC822
C430
C429
C828
D823
D821
C827
D822
L961
IC961
D961
C962
C964
C963
L405
Q801
R801
C806
FU844
C801
C802
R810
C783
C781
Q781
D781
R782
Q771
R771
C771
R772
C772
C782
R781
Q782
Q804
R809
C813
R808
C812
R807
Q803
L811
C814
C810
C811
140
130
120
110
100
90
80
70
60
50
40
30
20
10
Y
0
X
90
80
70
60
50
40
30
20
10
E
1
5

A

4.2 RGB CONNECTOR PCB

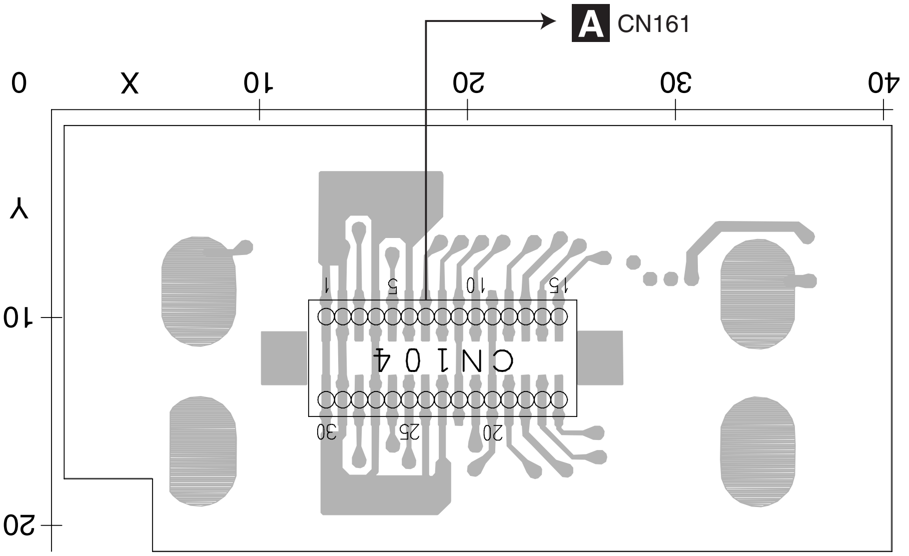
B RGB CONNECTOR PCB

SIDE A


20
10
Y
0
X
10
20
30
40
TO NAVI
25
20
15
10
5
1
CN951
C953
C952
C951
CN952
A CN162

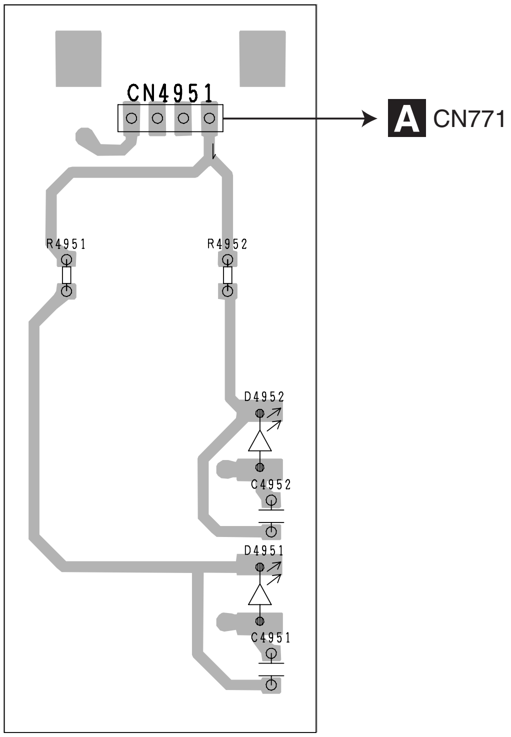
B RGB CONNECTOR PCB

SIDE B

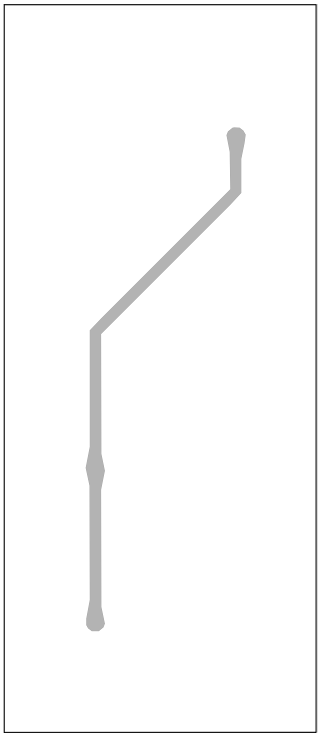

A CN161
0
X
10
20
30
40
Y
10
20
1
5
10
15
CN104
30
25
20

4.3 PANEL PCB

G PANEL PCB **SIDE A**

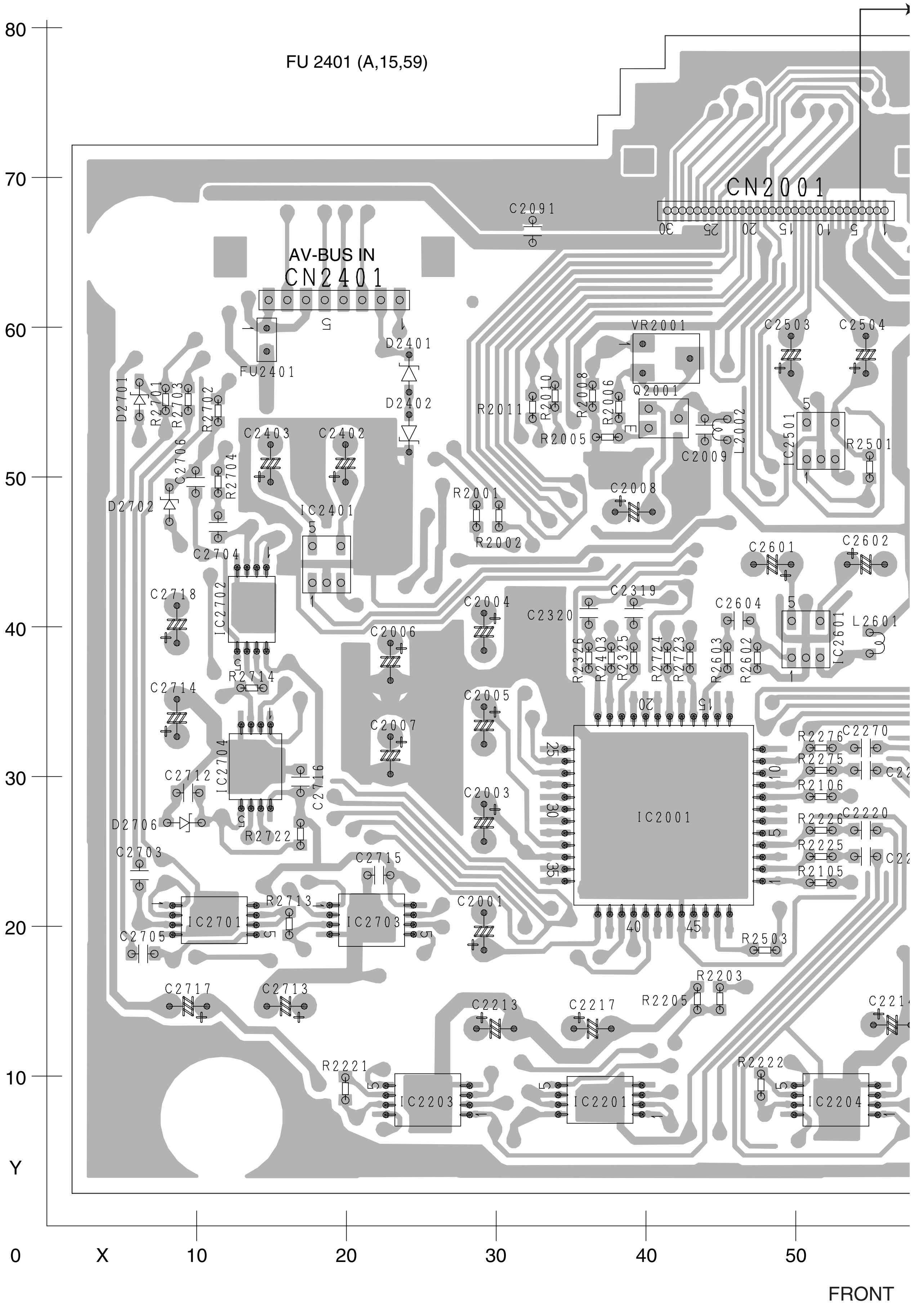

CN4951
A
CN771
R4951
R4952
D4952
C4952
D4951
C4951

G PANEL PCB **SIDE B**



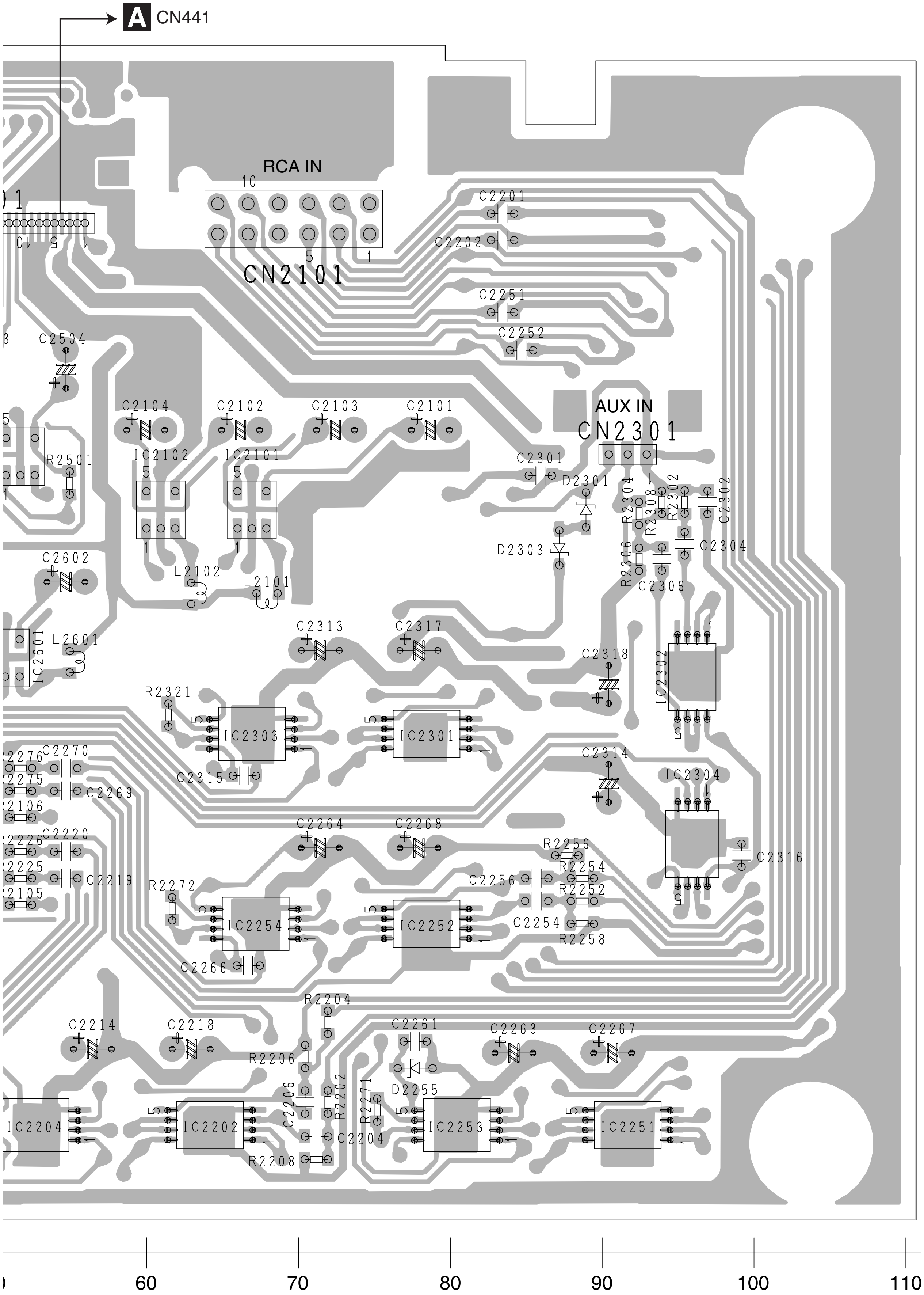
4.4 AV SELECTOR UNIT

C AV SELECTOR UNIT


FU 2401 (A,15,59)
CN2001
C2091
AV-BUS IN
CN2401
FU2401
D2401
D2402
VR2001
Q2001
C2503
C2504
D2701
R2701
R2703
R2702
C2403
C2402
R2011
R2010
R2008
R2006
R2005
C2009
L2002
IC2501
R2501
C2706
R2704
D2702
R2001
R2002
C2008
IC2401
C2704
C2601
C2602
C2718
IC2702
C2004
C2320
C2319
C2604
IC2601
L2601
C2006
R2326
R2403
R2325
R2724
R2723
R2603
R2602
C2714
R2714
C2005
C2007
IC2704
C2716
C2712
D2706
R2722
C2003
IC2001
R2276
C2270
R2275
R2106
R2226
C2220
R2225
R2105
C2703
C2715
R2713
IC2701
IC2703
C2001
C2705
R2503
R2203
C2717
C2713
C2213
C2217
R2205
R2221
R2222
IC2203
IC2201
IC2204
80
70
60
50
40
30
20
10
Y
0
X
10
20
30
40
50
FRONT

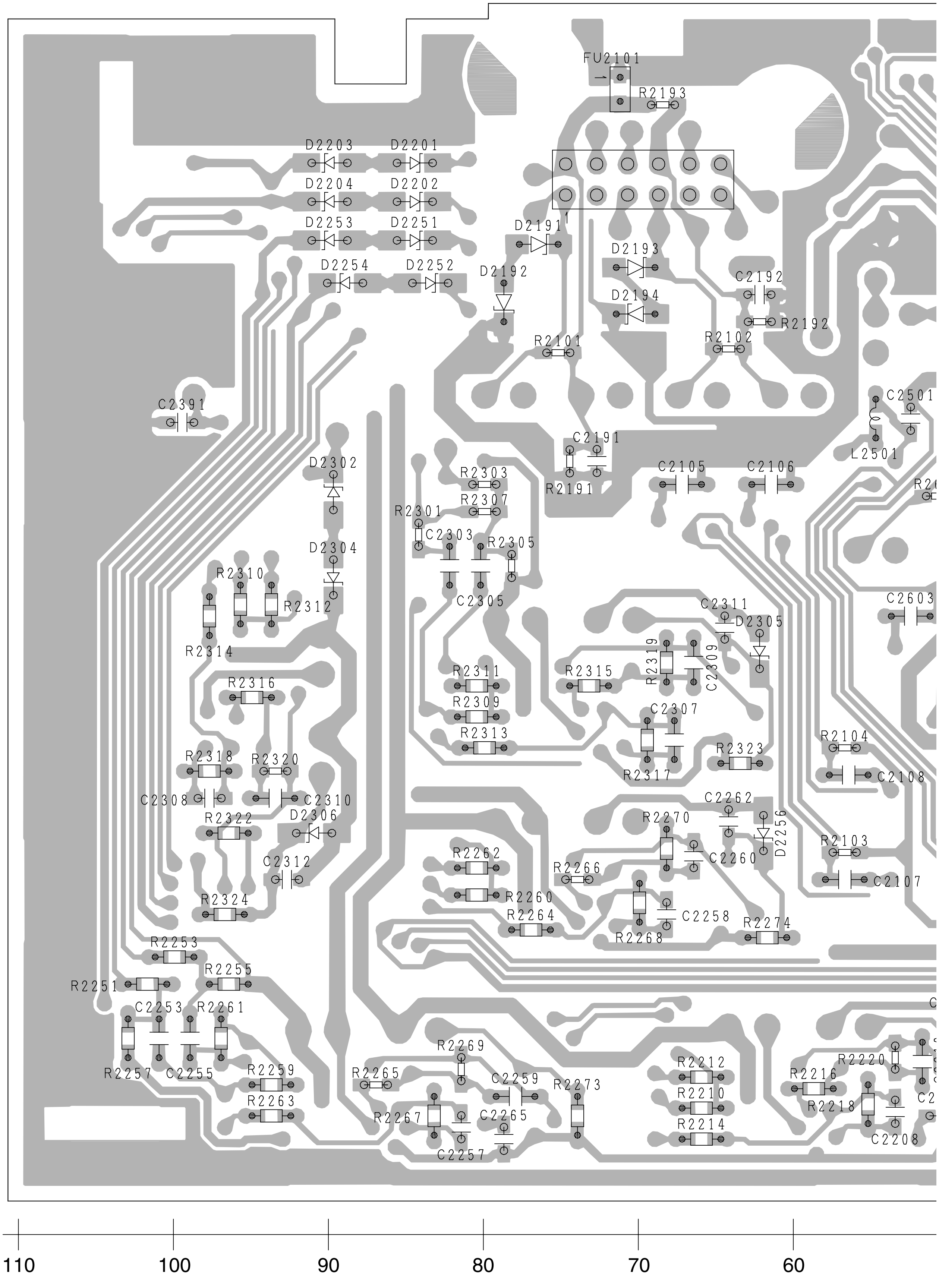
C

SIDE A

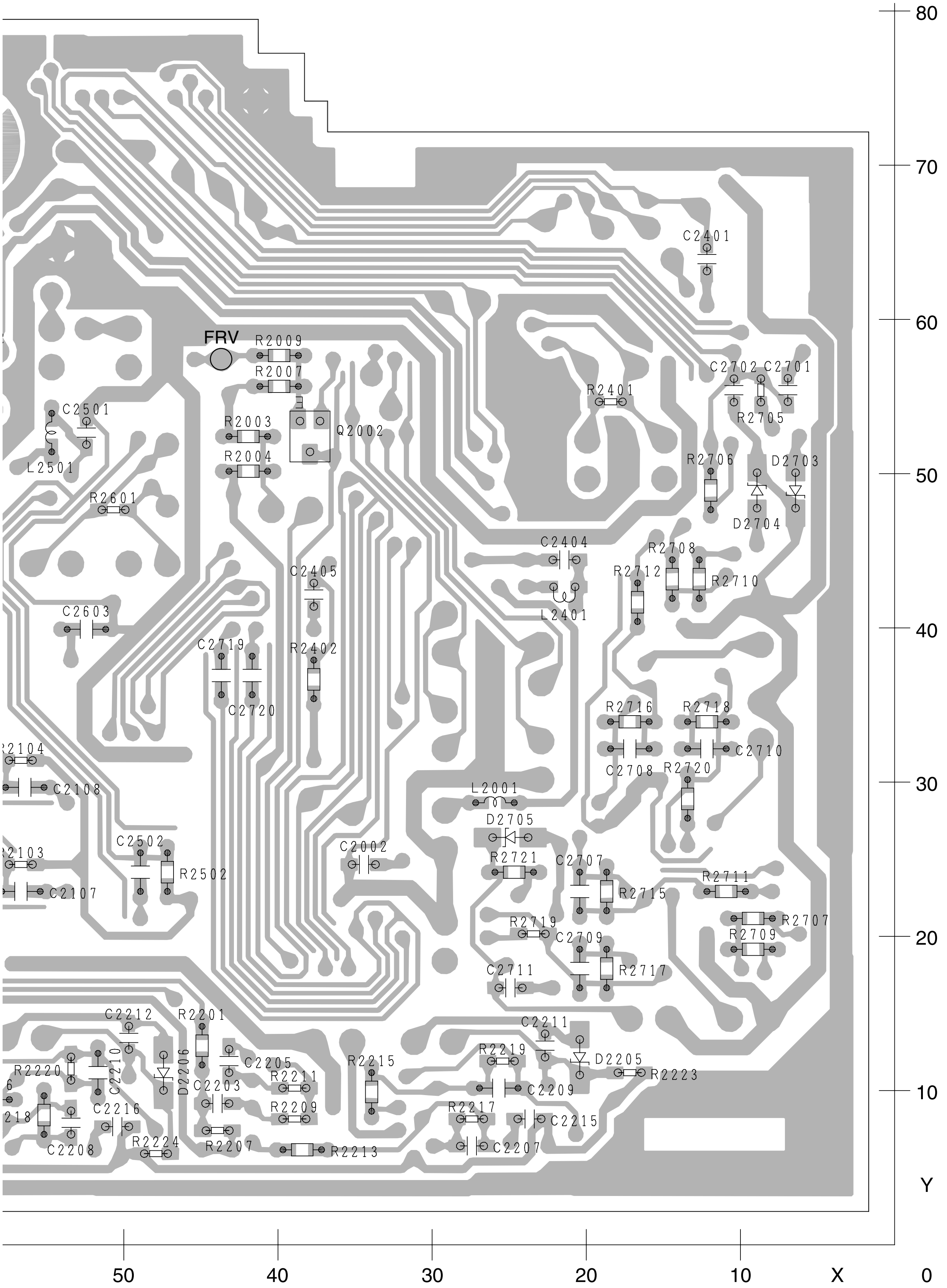

A CN441
RCA IN
10
CN2101
5
1
C2201
C2202
C2251
C2252
C2504
AUX IN
CN2301
C2104
C2102
C2103
C2101
IC2102
IC2101
R2501
C2301
D2301
R2304
R2308
R2302
C2302
D2303
R2306
C2304
C2306
C2602
L2102
L2101
IC2601
L2601
C2313
C2317
C2318
IC2302
R2321
IC2303
IC2301
C2315
C2314
IC2304
C2270
R2276
R2275
C2269
R2106
C2220
R2226
R2225
C2219
R2105
C2264
C2268
R2256
R2254
R2252
C2256
C2254
R2258
C2316
R2272
IC2254
IC2252
C2266
R2204
C2214
C2218
C2261
C2263
C2267
R2206
D2255
C2206
R2202
R2271
IC2204
IC2202
C2204
R2208
IC2253
IC2251
60
70
80
90
100
110

FRONT

C AV SELECTOR UNIT

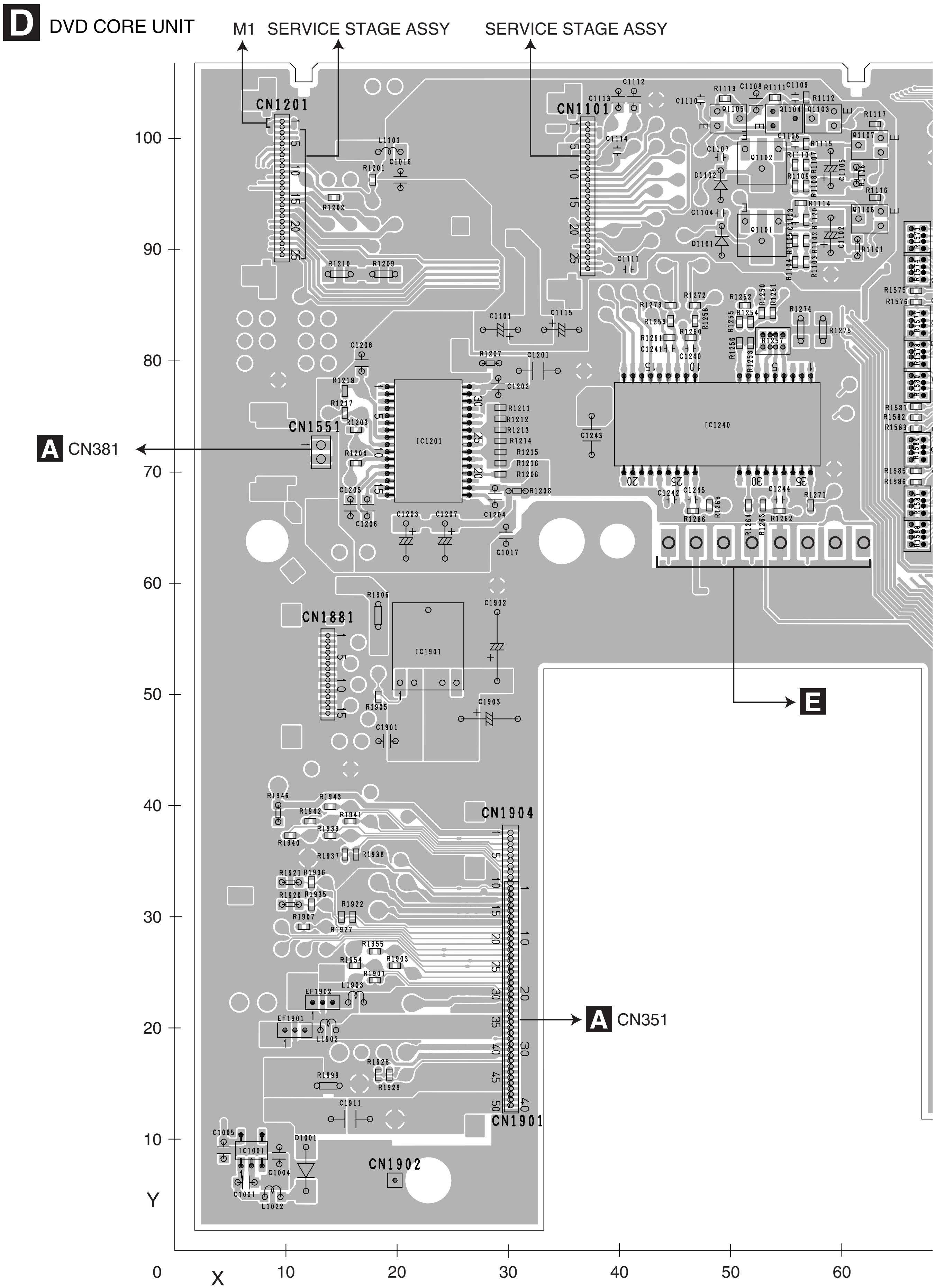

FU2101
R2193
D2203
D2201
D2204
D2202
D2253
D2251
D2191
D2193
D2254
D2252
D2192
C2192
D2194
R2192
R2101
R2102
C2391
C2501
C2191
L2501
D2302
R2303
C2105
C2106
R2307
R2191
R2301
C2303
R2305
D2304
R2310
R2312
C2305
C2311
C2603
D2305
R2314
R2319
C2309
R2311
R2315
R2316
R2309
C2307
R2313
R2104
R2318
R2320
R2323
R2317
C2108
C2308
C2310
C2262
R2322
D2306
R2270
D2256
R2262
R2103
C2312
R2266
C2260
C2107
R2260
R2324
R2264
C2258
R2274
R2268
R2253
R2255
R2251
C2253
R2261
R2269
R2220
R2257
C2255
R2259
R2212
R2265
C2259
R2273
R2216
R2210
R2263
R2267
C2265
R2218
R2214
C2257
C2208
110
100
90
80
70
60

SIDE B


FRV
R2009
R2007
R2003
R2004
Q2002
C2501
L2501
R2601
C2603
C2405
C2719
C2720
R2402
R2104
C2108
R2103
C2107
C2502
R2502
C2002
C2401
C2702
C2701
R2705
R2401
R2706
D2703
D2704
C2404
L2401
R2708
R2712
R2710
R2716
R2718
C2708
C2710
R2720
L2001
D2705
R2721
C2707
R2715
R2711
R2707
R2709
R2719
C2709
R2717
C2711
C2212
R2201
C2210
D2206
C2205
R2220
R2211
C2203
R2209
R2218
C2216
C2208
R2224
R2207
R2213
R2215
C2211
R2219
D2205
R2223
C2209
R2217
C2215
C2207
80
70
60
50
40
30
20
10
Y
0
50
40
30
20
10
X

C

4.5 DVD CORE UNIT


D
DVD CORE UNIT
M1 SERVICE STAGE ASSY
SERVICE STAGE ASSY
A CN381
A CN351
E
CN1201
CN1101
CN1551
CN1881
CN1904
CN1901
CN1902
IC1201
IC1240
IC1901
IC1001
L1101
R1201
C1016
R1202
R1210
R1209
C1112
C1113
C1110
R1113
C1108
R1111
C1109
R1112
Q1105
Q1104
Q1103
R1117
C1114
C1106
R1115
Q1107
C1107
Q1102
R1110
R1109
R1107
R1108
C1105
R1106
D1102
R1116
R1114
C1104
Q1101
C1103
R1120
Q1106
D1101
R1105
R1102
C1102
R1101
R1104
R1103
C1111
R1575
R1576
R1272
R1252
R1250
R1251
R1273
R1258
R1254
R1255
R1274
R1259
R1260
R1257
R1275
R1261
R1256
C1241
C1240
R1253
C1101
C1115
C1208
R1207
C1201
R1218
C1202
R1217
R1211
R1212
R1213
R1214
R1215
R1216
R1206
R1203
R1204
R1208
C1243
R1581
R1582
R1583
R1585
R1586
C1205
C1206
C1203
C1207
C1204
C1017
C1242
C1245
R1266
R1265
R1264
R1263
C1244
R1262
R1271
R1906
C1902
R1905
C1903
C1901
R1946
R1943
R1942
R1941
R1940
R1939
R1937
R1938
R1921
R1936
R1920
R1935
R1922
R1907
R1927
R1955
R1954
R1903
R1901
EF1902
L1903
EF1901
L1902
R1928
R1999
R1929
C1911
C1005
D1001
C1004
C1001
L1022
100
90
80
70
60
50
40
30
20
10
Y
0
X
10
20
30
40
50
60

SIDE A

A

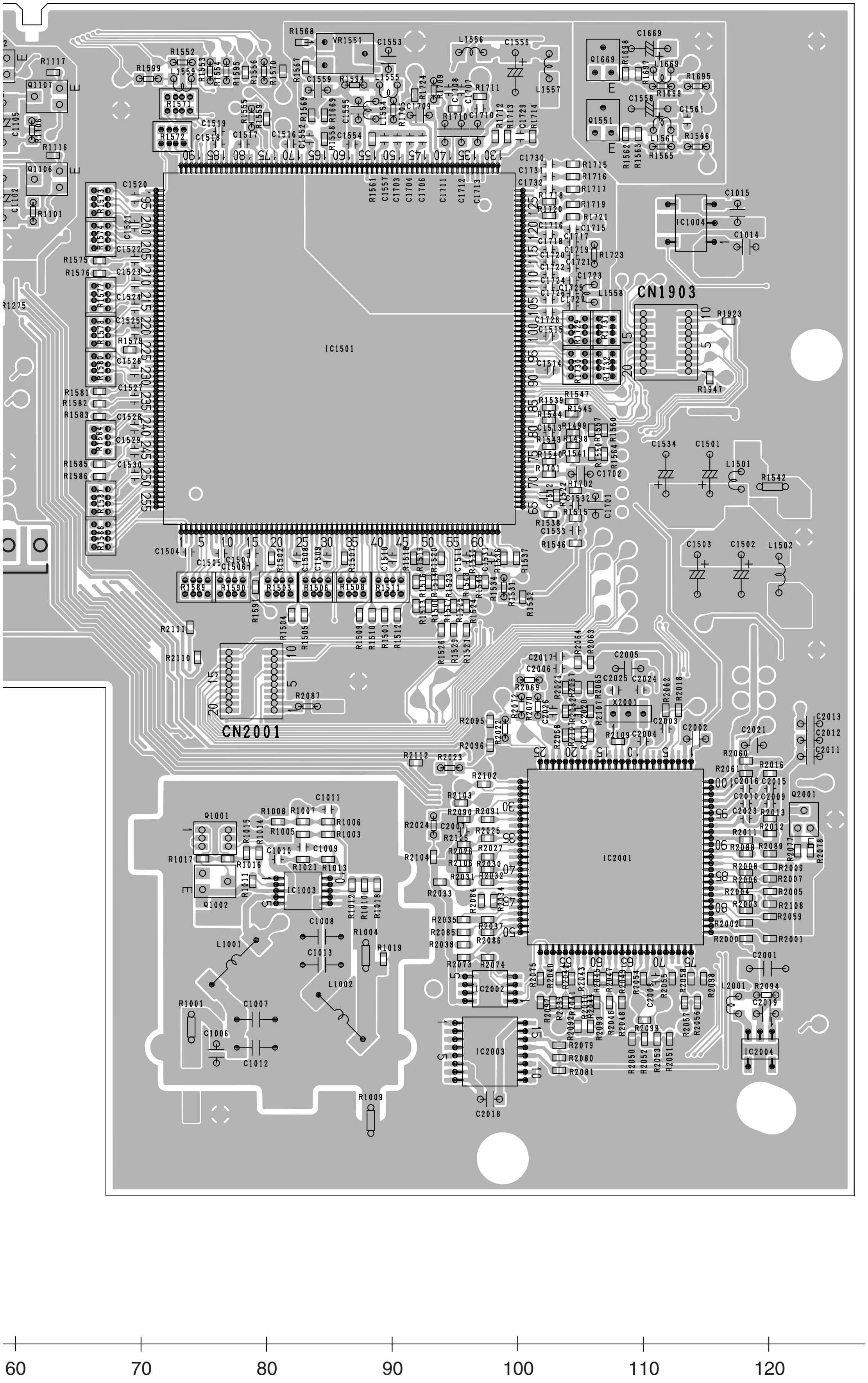
B

C

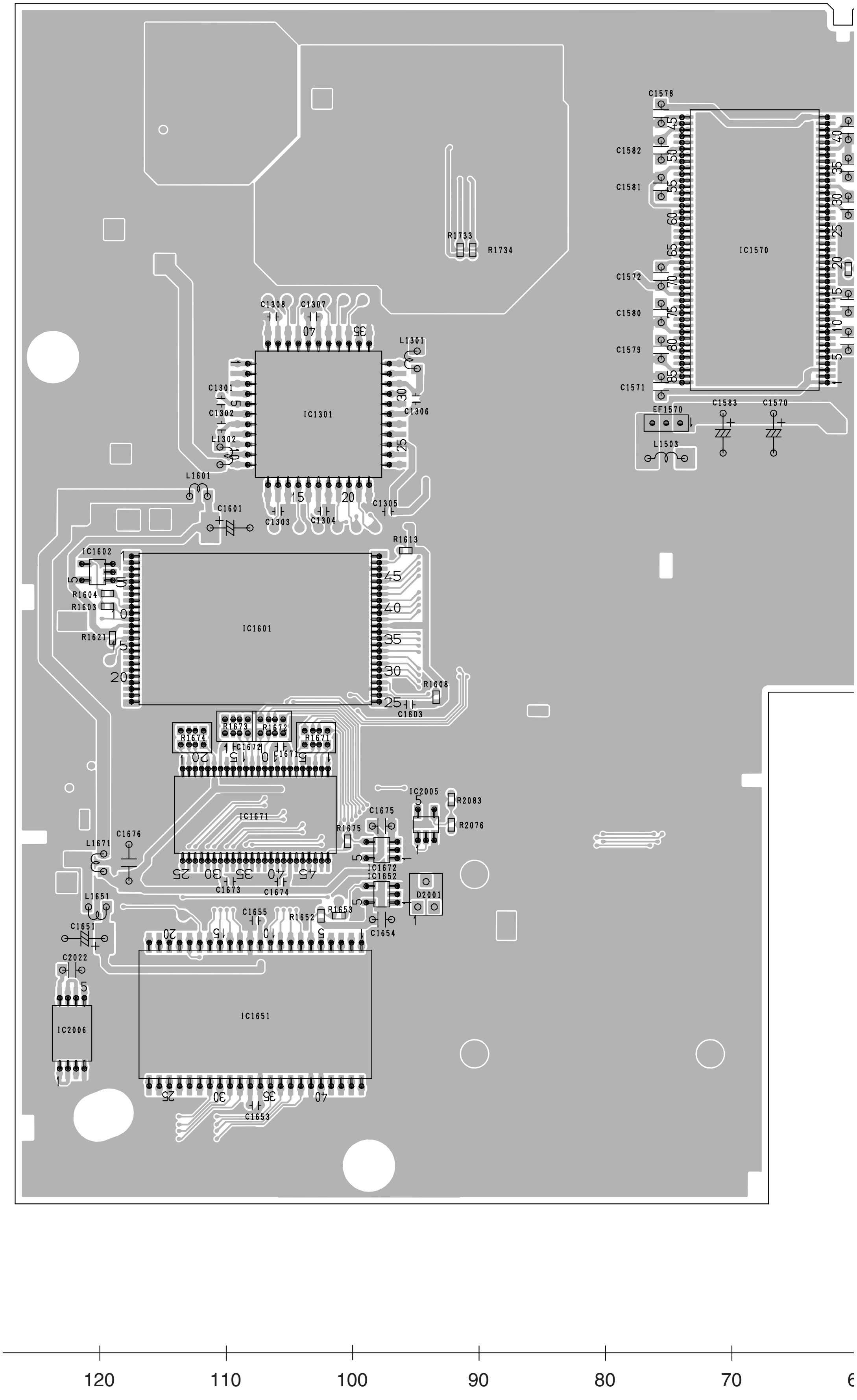
D

E

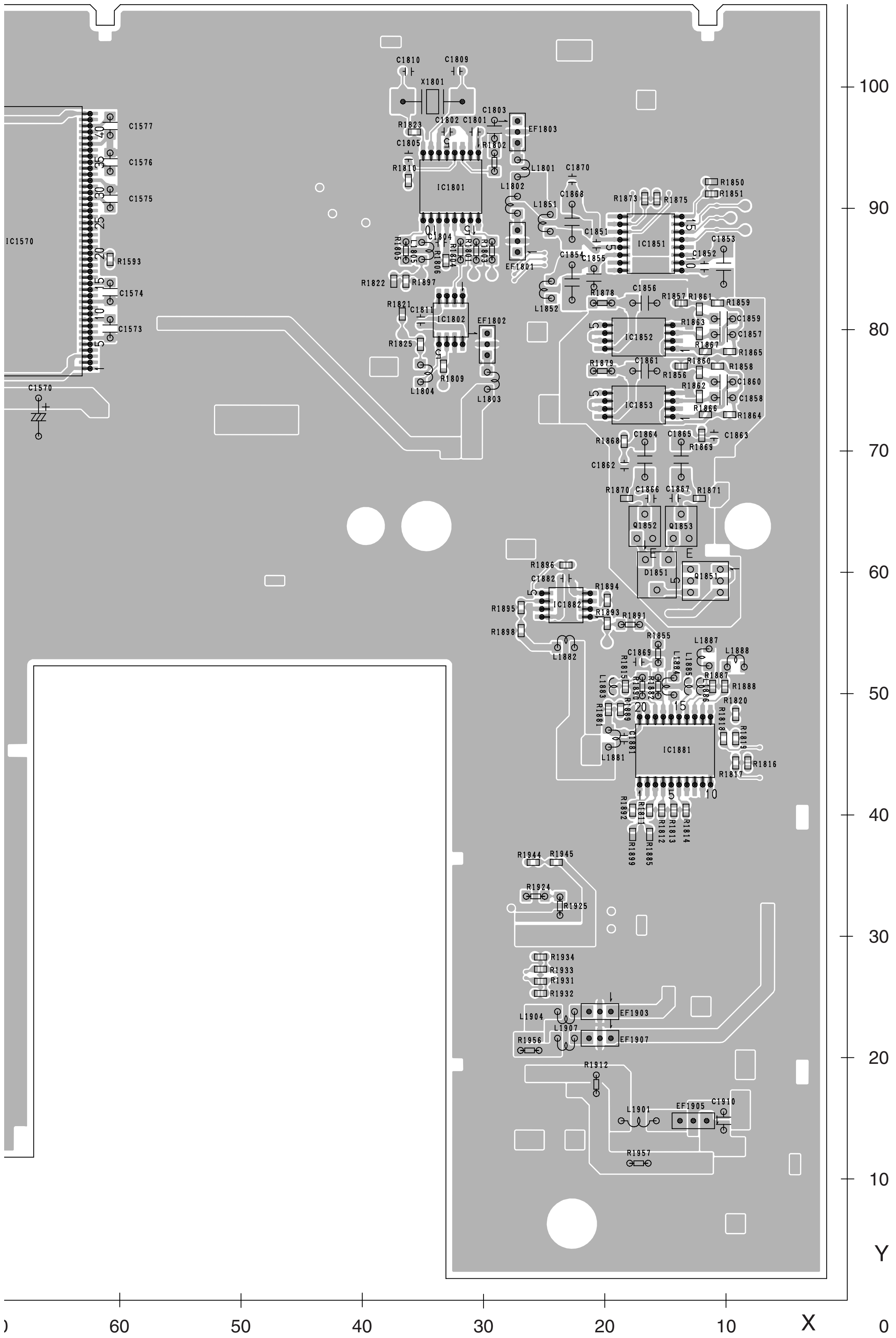
F


IC1501
IC2001
IC1003
IC1004
IC2002
IC2003
IC2004
CN1903
CN2001
X2001
VR1551
Q1001
Q1002
Q1106
Q1107
Q1551
Q1669
Q2001
L1001
L1002
L1501
L1502
L1555
L1556
L1557
L1558
L1559
L1561
L1669
L2001
C1501
C1502
C1503
C1534
C1553
C1556
C1558
C1669
C1006
C1007
C1012
C2018
R1001
R1009
R1275
60
70
80
90
100
110
120

D DVD CORE UNIT


C1578
C1582
C1581
C1572
C1580
C1579
C1571
IC1570
C1583
C1570
EF1570
L1503
R1733
R1734
C1308
C1307
L1301
C1301
C1302
L1302
IC1301
C1306
L1601
C1601
C1303
C1304
C1305
R1613
IC1602
R1604
R1603
R1621
IC1601
R1608
C1603
R1674
R1673
R1672
R1671
C1672
C1671
IC1671
R1675
C1675
IC2005
R2083
R2076
IC1672
IC1652
D2001
L1671
C1676
C1673
C1674
L1651
C1655
R1652
R1653
C1654
C1651
C2022
IC2006
IC1651
C1653
120
110
100
90
80
70

SIDE B


C1810
C1809
X1801
C1803
C1802
C1801
EF1803
R1823
C1805
R1802
R1810
L1801
IC1801
C1870
L1802
C1868
R1873
R1875
R1850
R1851
L1851
C1851
IC1851
C1853
C1852
C1854
C1855
EF1801
C1804
R1805
L1805
R1806
R1804
R1801
R1803
R1822
R1897
R1821
C1811
IC1802
EF1802
L1852
R1878
C1856
R1857
R1861
R1859
R1863
C1859
IC1852
C1857
R1867
R1865
R1825
R1809
L1804
L1803
R1879
C1861
R1860
R1858
R1856
C1860
R1862
IC1853
C1858
R1866
R1864
R1868
C1864
C1865
C1863
R1869
C1862
R1870
C1866
C1867
R1871
Q1852
Q1853
D1851
Q1851
C1577
C1576
C1575
IC1570
R1593
C1574
C1573
C1570
R1896
C1882
R1894
IC1882
R1895
R1893
R1891
R1898
L1882
R1855
L1887
L1888
C1869
L1884
L1885
R1815
R1887
R1888
L1883
R1820
R1881
R1818
R1819
C1881
IC1881
L1881
R1816
R1817
R1892
R1811
R1812
R1813
R1814
R1899
R1885
R1944
R1945
R1924
R1925
R1934
R1933
R1931
R1932
L1904
EF1903
L1907
R1956
EF1907
R1912
L1901
EF1905
C1910
R1957
100
90
80
70
60
50
40
30
20
10
Y
60
50
40
30
20
10
X
0

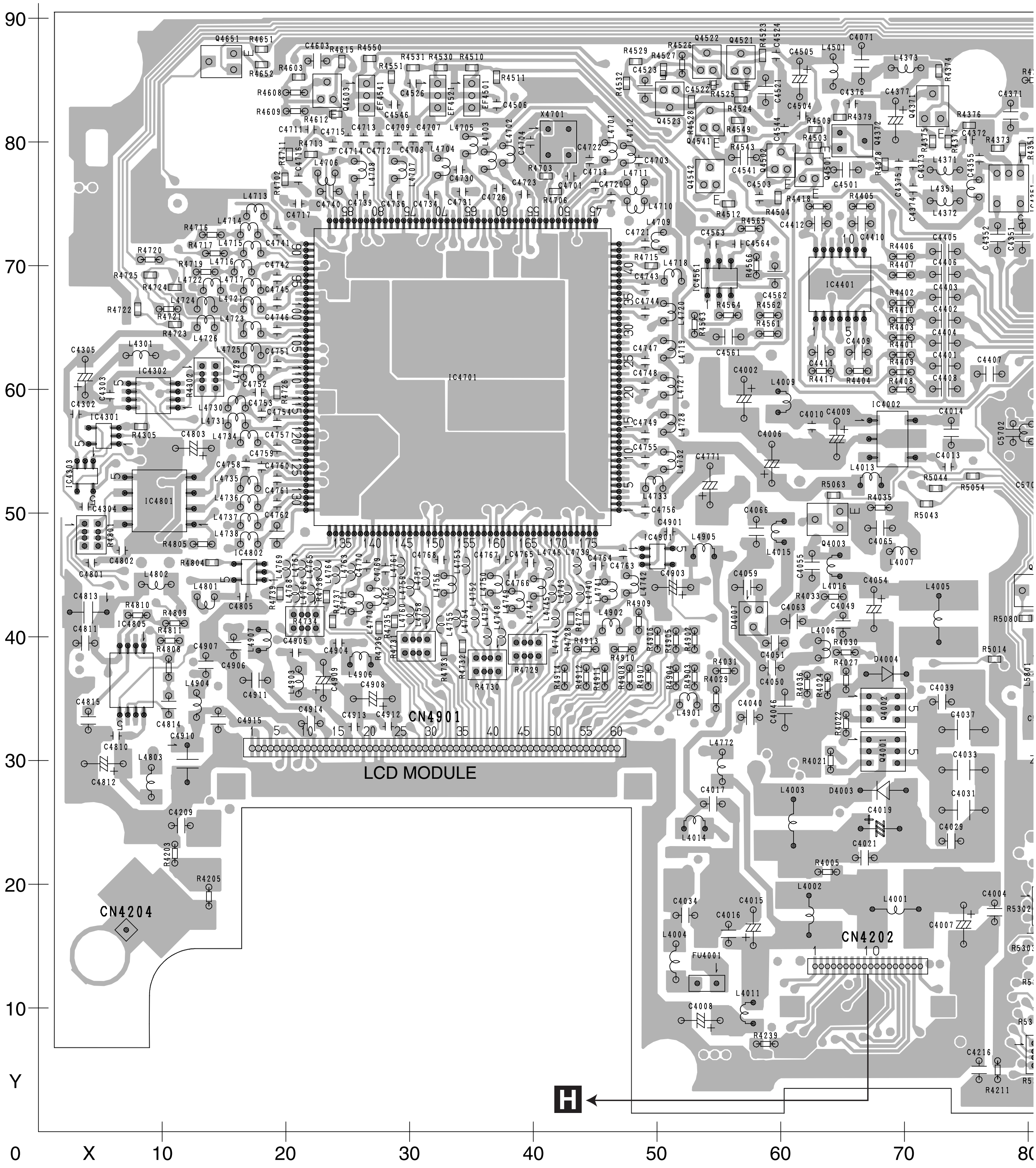
D

4.6 MONITOR PCB

F MONITOR PCB

A

FU 4001 (A,54,12)
FU 4101 (A,122,79)


90
80
70
60
50
40
30
20
10
Y
0
X
10
20
30
40
50
60
70
80
IC4701
IC4401
IC4002
IC4302
IC4301
IC4303
IC4801
IC4805
IC4802
IC4901
IC4561
X4701
CN4901
LCD MODULE
CN4204
CN4202
FU4001
Q4651
Q4522
Q4521
Q4523
Q4541
Q4542
Q4501
Q4502
Q4371
Q4372
Q4003
Q4002
Q4001
D4004
D4003
D4007
H

B

C

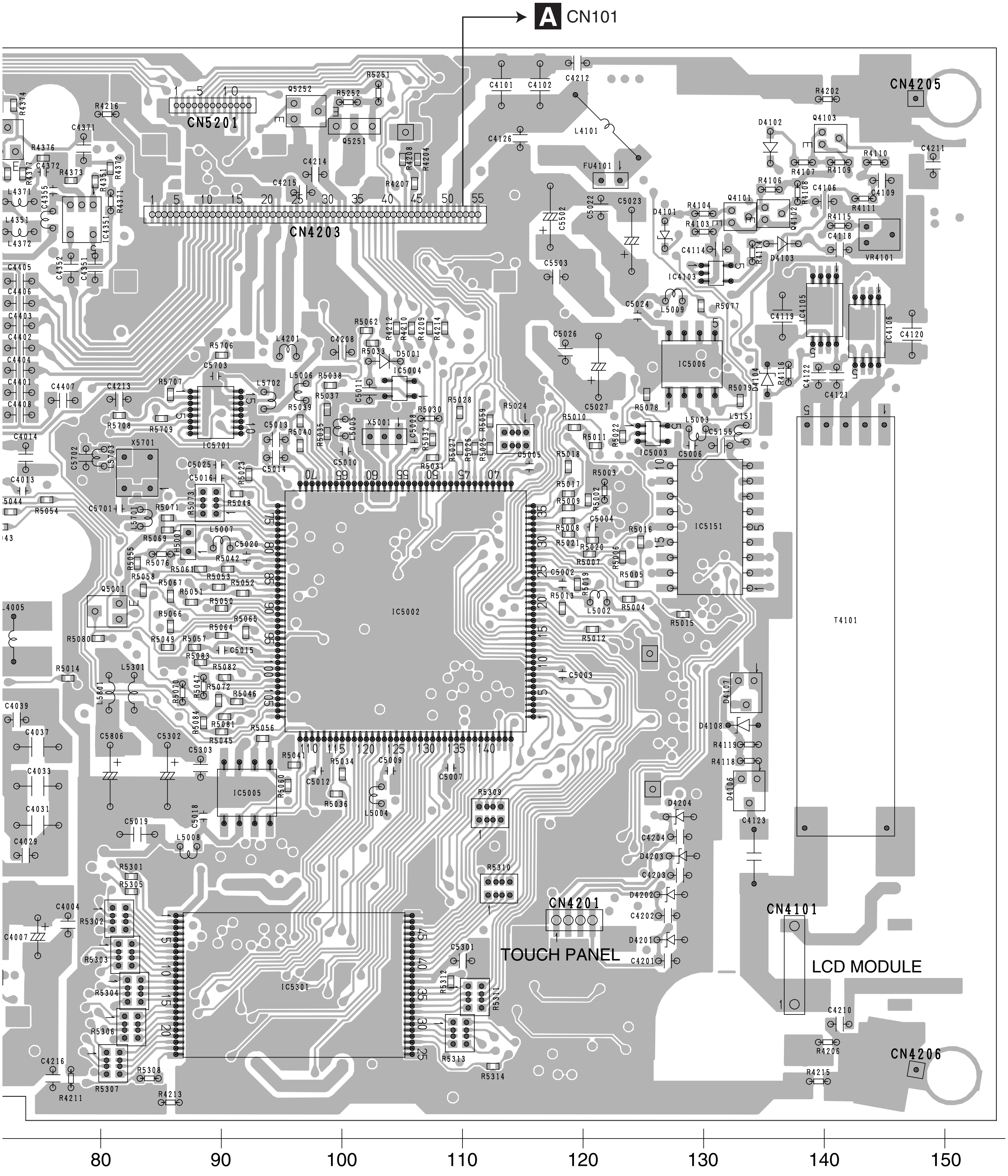
D

E

F

F

SIDE A


A CN101
CN5201
CN4203
CN4205
CN4201
TOUCH PANEL
CN4101
LCD MODULE
CN4206
IC5002
IC5301
IC5005
IC5006
IC5151
IC5701
IC5003
IC5004
IC4103
IC4105
IC4106
IC4351
T4101
X5701
X5001
Q5001
Q5251
Q5252
Q4101
Q4102
Q4103
VR4101
FU4101
L4101
L4201
L4351
L4371
L4372
L5001
L5002
L5003
L5004
L5005
L5006
L5007
L5008
L5009
L5151
L5301
L5701
L5702
L5703
L5801
D4101
D4102
D4103
D4104
D4107
D4108
D4106
D4201
D4202
D4203
D4204
D5001
C4101
C4102
C4212
C4126
C4211
C4214
C4215
C5022
C5023
C5502
C5503
C5024
C5026
C5027
C4106
C4109
C4114
C4118
C4119
C4120
C4121
C4122
C4123
C4201
C4202
C4203
C4204
C4210
C4216
C4004
C4007
C4029
C4031
C4033
C4037
C4039
C4013
C4014
C4401
C4402
C4403
C4404
C4405
C4406
C4407
C4408
C4213
C4208
C4351
C4352
C4355
C4371
C4372
C5002
C5003
C5004
C5005
C5006
C5007
C5008
C5009
C5010
C5011
C5012
C5013
C5014
C5015
C5016
C5018
C5019
C5020
C5025
C5155
C5301
C5302
C5303
C5701
C5702
C5703
C5806
R4202
R4204
R4207
R4208
R4209
R4210
R4212
R4214
R4216
R4206
R4211
R4213
R4215
R4103
R4104
R4106
R4107
R4108
R4109
R4110
R4111
R4114
R4115
R4116
R4118
R4119
R4371
R4372
R4373
R4374
R4376
R4377
R5251
R5252
R5301
R5302
R5303
R5304
R5305
R5306
R5307
R5308
R5309
R5310
R5311
R5312
R5313
R5314
R5701
R5706
R5707
R5708
R5709
R5003
R5004
R5005
R5006
R5007
R5008
R5009
R5010
R5011
R5012
R5013
R5014
R5015
R5016
R5017
R5018
R5019
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R5021
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R5023
R5024
R5025
R5026
R5027
R5028
R5030
R5031
R5032
R5033
R5034
R5035
R5036
R5037
R5038
R5039
R5040
R5041
R5042
R5045
R5046
R5047
R5048
R5049
R5050
R5051
R5052
R5053
R5054
R5055
R5056
R5057
R5058
R5059
R5060
R5061
R5062
R5064
R5065
R5066
R5067
R5069
R5070
R5071
R5072
R5073
R5076
R5077
R5078
R5079
R5080
R5081
R5082
R5083
R5084
R5102
80
90
100
110
120
130
140
150

F

A

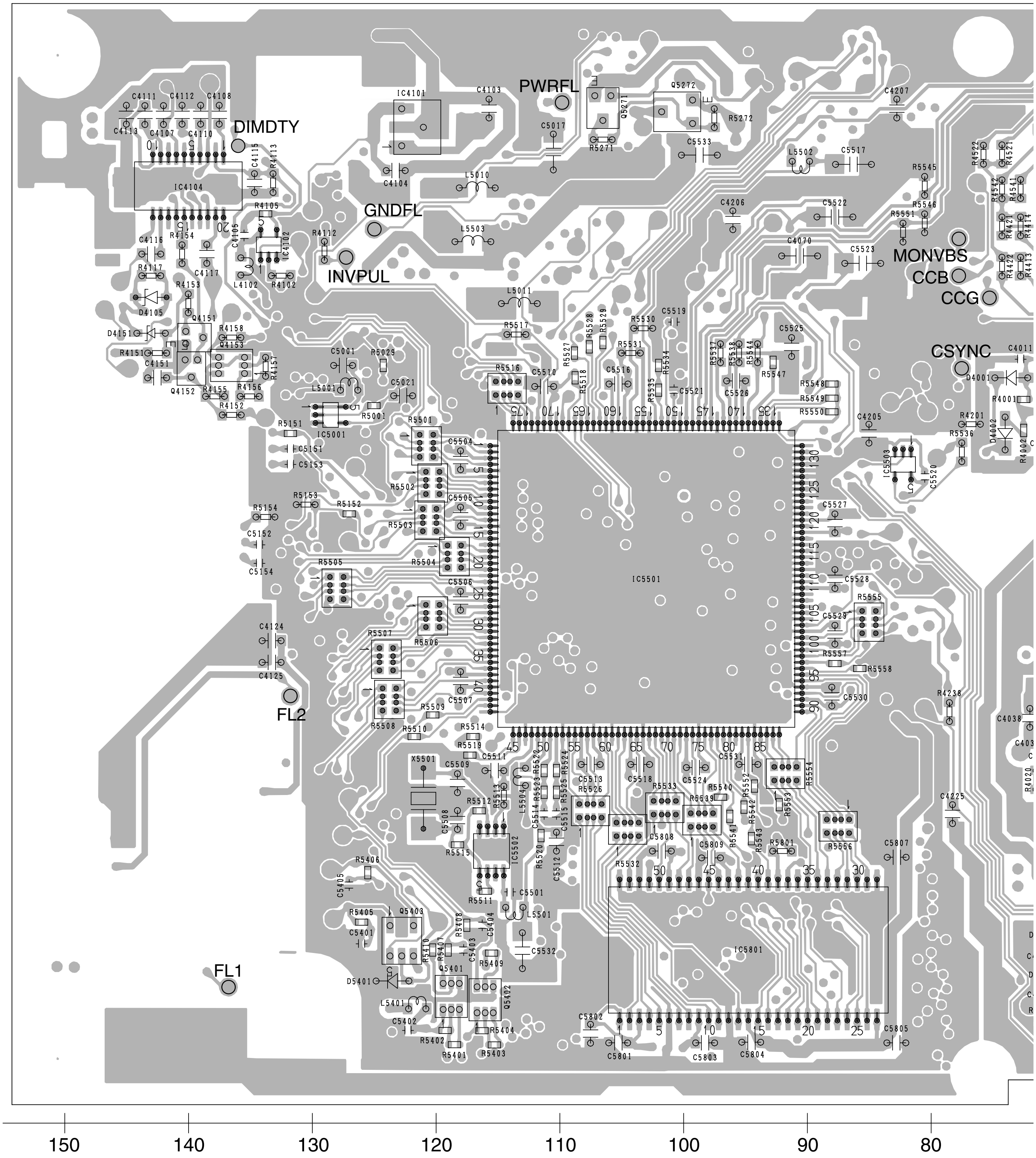
F MONITOR PCB

B

C

D

E


DIMDTY
PWRFL
GNDFL
INVPUL
MONVBS
CCB
CCG
CSYNC
FL2
FL1
IC4101
IC4102
IC4104
IC5001
IC5501
IC5502
IC5503
IC5801
X5501
Q5271
Q5272
Q4151
Q4152
Q4153
Q5401
Q5402
Q5403
150
140
130
120
110
100
90
80

F

F

SIDE B

A

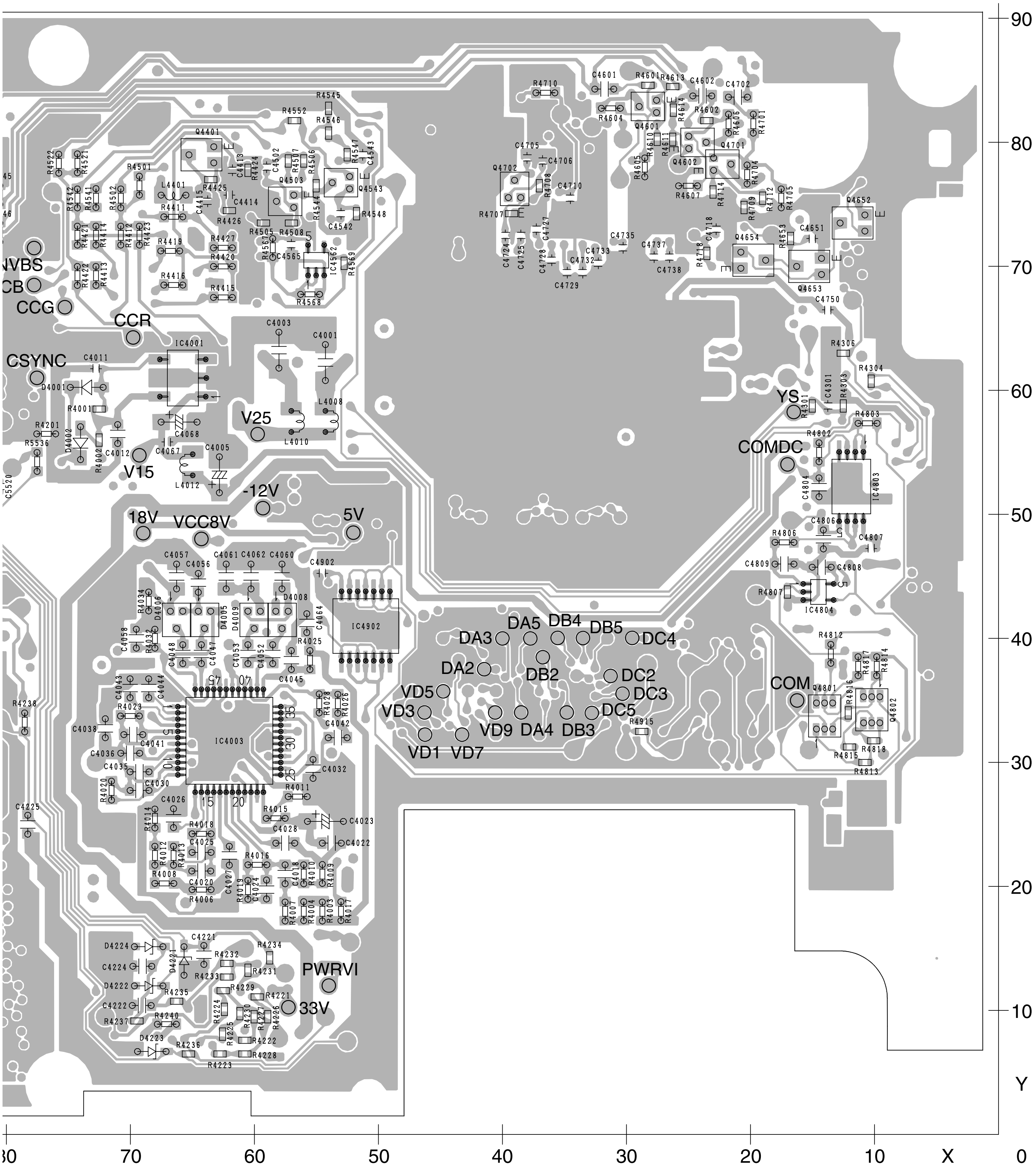
B

C

D

E

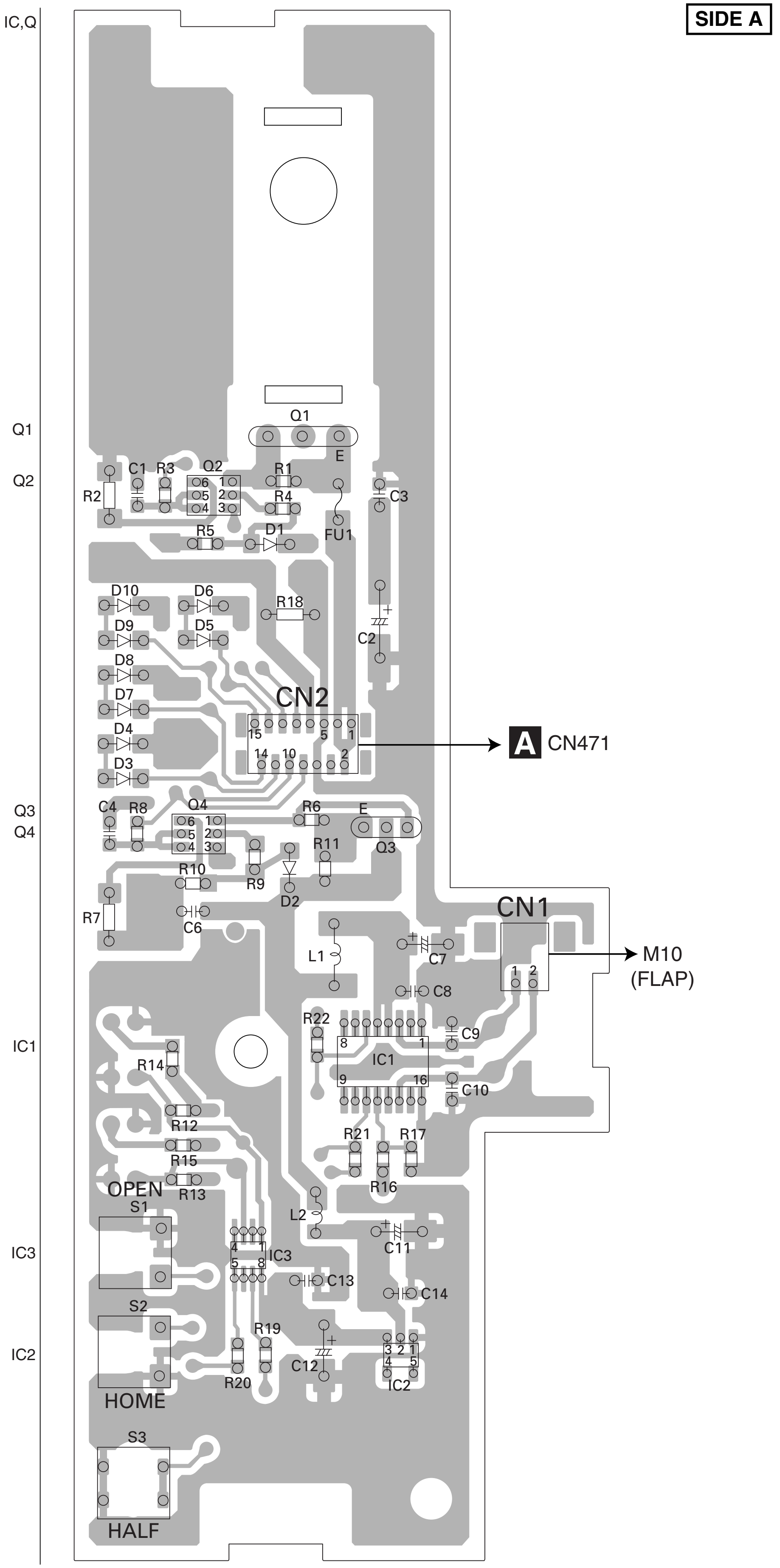
F


90
80
70
60
50
40
30
20
10
Y
80
70
60
50
40
30
20
10
X
0
NVBS
CB
CCG
CCR
CSYNC
V25
V15
-12V
18V
VCC8V
5V
YS
COMDC
DA3
DA5
DB4
DB5
DC4
DA2
DB2
DC2
DC3
VD5
VD3
VD9
DA4
DB3
DC5
VD1
VD7
COM
PWRVI
33V
IC4001
IC4003
IC4902
IC4562
IC4803
IC4804
Q4401
Q4503
Q4543
Q4601
Q4602
Q4701
Q4702
Q4652
Q4653
Q4654
Q4801
Q4802
L4008
L4010
L4012
L4401

F

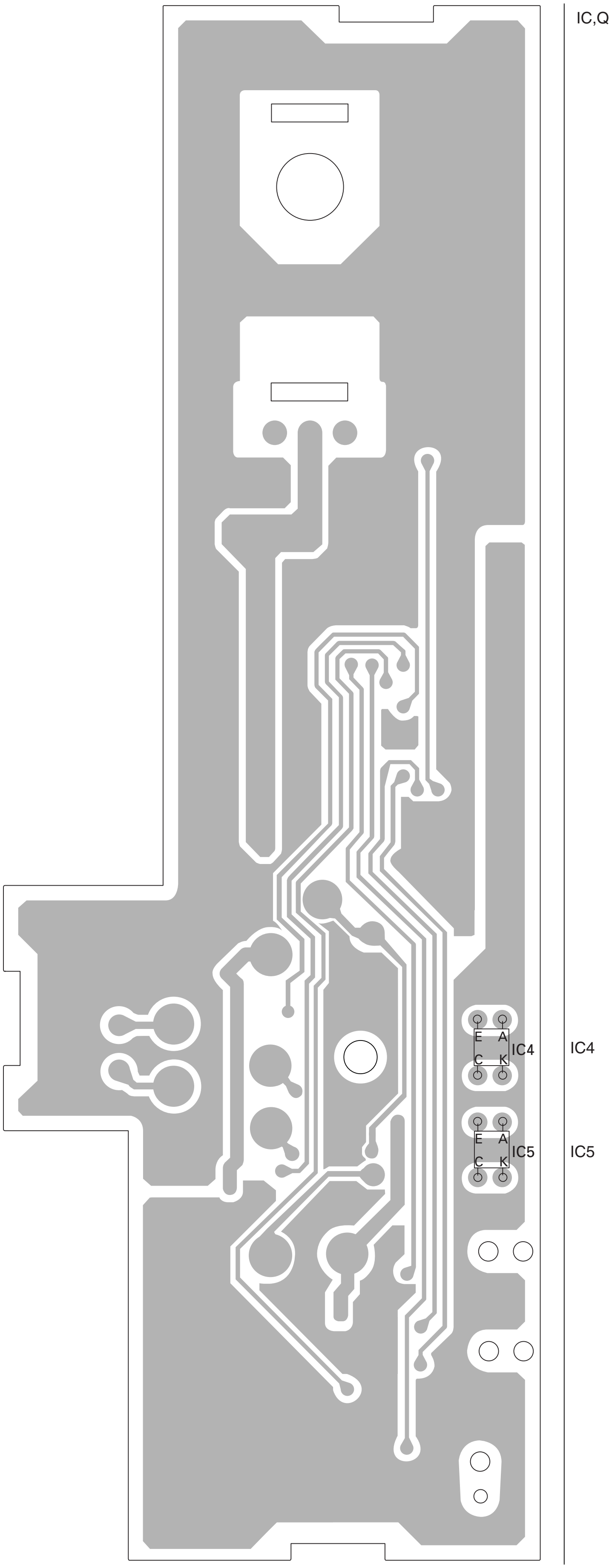
4.7 MAIN PCB UNIT

I MAIN PCB UNIT


SIDE A
IC,Q
Q1
Q2
Q3
Q4
IC1
IC3
IC2
Q1
E
C1
R3
Q2
R1
R4
R2
C3
R5
D1
FU1
D10
D6
R18
D9
D5
C2
D8
D7
CN2
D4
D3
15
5
1
14
10
2
A CN471
C4
R8
Q4
R6
E
R11
Q3
R10
R9
D2
R7
C6
CN1
L1
C7
M10
(FLAP)
C8
R22
C9
8
1
IC1
9
16
C10
R14
R12
R15
R21
R17
R16
OPEN
S1
R13
L2
C11
4
1
5
8
IC3
C13
C14
S2
R19
3 2 1
4 5
C12
R20
IC2
HOME
S3
HALF

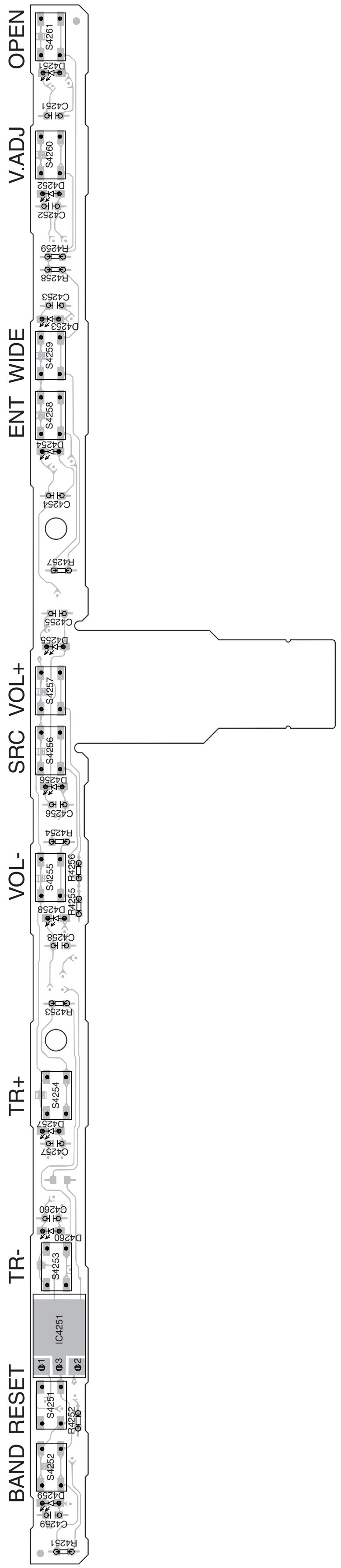
I MAIN PCB UNIT

SIDE B

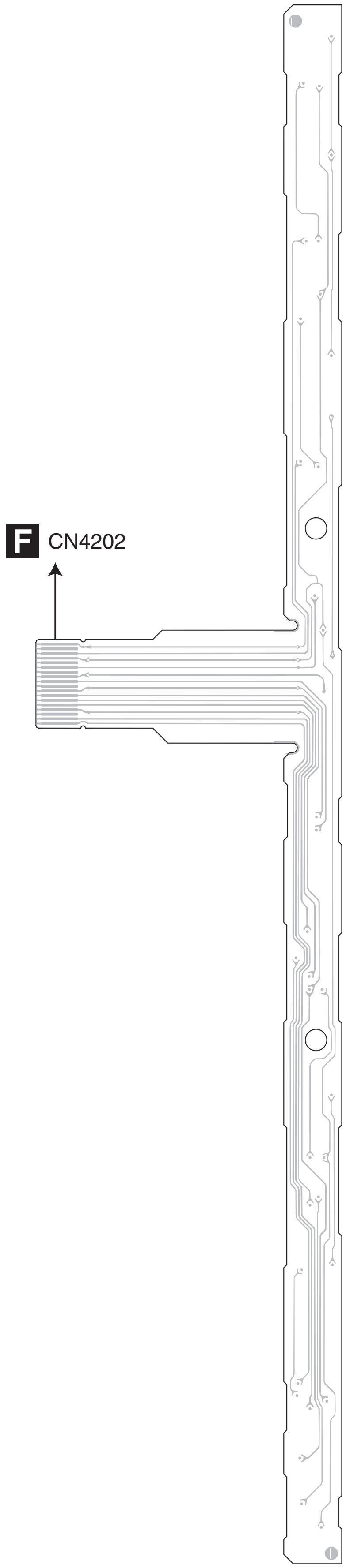

IC,Q
E
A
C
K
IC4
IC4
E
A
C
K
IC5
IC5

4.8 KEY UNIT

H KEY UNIT **SIDE A**


OPEN
S4261
D4251
C4251
V.ADJ
S4260
D4252
C4252
R4259
R4258
C4253
D4253
WIDE
S4259
ENT
S4258
D4254
C4254
R4257
C4255
D4255
VOL+
S4257
SRC
S4256
D4256
C4256
R4254
VOL-
S4255
R4256
R4255
D4258
C4258
R4253
TR+
S4254
D4257
C4257
C4260
D4260
TR-
S4253
IC4251
1
3
2
RESET
S4251
R4252
BAND
S4252
D4259
C4259
R4251

H KEY UNIT **SIDE B**



H

5. ELECTRICAL PARTS LIST

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*
  Chip Resistor
    RS1/○S○○○J,RS1/○○S○○○J
  Chip Capacitor (except for CQS.....)
    CKS....., CCS....., CSZS.....
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Meaning of the figures and others in the parentheses in the parts list.*
  Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.
  IC 301 (A, 91, 111) IC NJM2068V

Circuit Symbol and No. **Part No.**

Unit Number : CWN1675(UC)
Unit Number : CWN1679(RE)
Unit Number : CWN1678(RD)
Unit Number : CWN1677(RC)
Unit Number : CWN1676(RI)
Unit Name : Mother Unit
Unit Number : CWN1685(UC)
Unit Name : AV Selector Unit
Unit Number : CWN1681(RE, RD, RC, RI)
Unit Name : AV Selector Unit
Unit Number : CWN1683
Unit Name : Monitor Unit
Unit Number : CWN1686
Unit Name : Key Unit
Unit Number : CZW5026
Unit Name : Main PCB Unit
Unit Number : CWX3333
Unit Name : DVD Core Unit
Unit Number : CWX2986
Unit Name : PCB Assy

Mother Unit
Consists of
Mother PCB
RGB Connector PCB

A B

Unit Number : CWN1675(UC)
Unit Number : CWN1679(RE)
Unit Number : CWN1678(RD)
Unit Number : CWN1677(RC)
Unit Number : CWN1676(RI)
Unit Name : Mother Unit

MISCELLANEOUS

Circuit Symbol and No.		Part No.
IC 141	(A,120,81) IC	HA12241FP
IC 161	(B,71,39) IC	TC4S81F
IC 171	(B,26,120) IC	NJM2138V
IC 201	(B,83,93) IC	PML009A
IC 241	(A,155,115) IC	PAL007B
IC 301	(A,46,106) IC	NJM4558V
IC 302	(A,56,112) IC	NJM4558V
IC 303	(B,64,98) IC	NJM4580V
IC 331	(B,104,88) IC	PA2028A1
IC 351	(B,91,26) IC	SM5304AV
IC 352	(B,93,35) IC	TC7SET08FUS1
IC 353	(B,91,42) IC	S-80827CNUA-B8M
IC 354	(B,81,36) IC	TC7SET08FUS1
IC 355	(B,103,34) IC	TC74VHC08FTS1
IC 381	(A,53,125) IC	TC7WT125FU
IC 421	(B,70,83) IC	NJM4558MD
IC 451	(B,74,109) IC	NJM2136V
IC 452	(A,86,107) IC	BA7623F
IC 601	(A,87,52) IC	PE5535A
IC 602	(B,65,31) IC	TC7SET08FUS1
IC 651	(B,71,66) IC	S-80841CNUA-B82
IC 652	(A,66,59) IC	TC7SET08FUS1
IC 801	(A,25,27) IC	S-812C50AUA-C3E
IC 821	(A,168,99) IC	NJM2388F84
IC 822	(B,39,44) IC	NJM2391DL1-33
IC 841	(B,120,70) IC	S-812C33AUA-C2N
IC 842	(A,123,56) IC	AN8011S
IC 843	(B,128,39) IC	BA00BC0WFP
IC 901	(A,152,28) IC	BP5451-1
IC 941	(B,139,57) IC	BA00BC0WFP
IC 961	(B,40,27) IC	S-818A35AUC-BGP
Q 121	(B,60,6) Transistor	DTC114EU
Q 122	(B,63,13) Transistor	DTA114EU
Q 123	(B,69,6) Transistor	2SC4081

Circuit Symbol and No.		Part No.
Q 124	(B,65,6) Transistor	2SC4081
Q 125	(B,72,7) Transistor	2SC4081
Q 141	(A,114,102) Transistor	UMF23N
Q 161	(B,82,64) Transistor	2SC4081
Q 171	(A,21,121) Transistor	2SC4081
Q 235	(A,67,73) Transistor	2SC4081
Q 241	(A,132,87) Transistor	DTC124EUA
Q 242	(B,154,100) Transistor	DTC144EU
Q 261	(B,102,110) Transistor	IMH23
Q 262	(B,108,117) Transistor	IMH23
Q 263	(B,96,110) Transistor	IMH23
Q 281	(B,135,87) Transistor	IMD2A
Q 282	(B,135,90) Transistor	2SC4081
Q 291	(B,87,109) Transistor	IMD2A
Q 301	(B,58,106) Transistor	DTC124EUA
Q 302	(B,57,119) Transistor	DTC323TU
Q 303	(B,62,109) Transistor	IMD2A
Q 304	(B,64,105) Transistor	DTC124EUA
Q 351	(A,102,32) Transistor	IMD2A
Q 352	(A,100,28) Transistor	IMH23
Q 381	(B,57,126) Transistor	UMF5N
Q 441	(B,66,52) Transistor	2SC4081
Q 451	(A,69,107) Transistor	2SC4081
Q 481	(A,88,126) Transistor	2SD1760F5
Q 482	(A,83,139) Transistor	DTC144EU
Q 483	(A,83,142) Transistor	DTC144EU
Q 484	(B,83,138) Transistor	UMF5N
Q 601	(B,83,42) Transistor	DTC124EUA
Q 701	(A,108,70) Transistor	2SC4081
Q 711	(A,115,70) Transistor	IMX1
Q 721	(A,109,65) Transistor	DTC114EU
Q 731	(A,130,76) Transistor	2SC4081
Q 741	(B,104,55) Transistor	2SA1576
Q 751	(B,111,56) Transistor	2SA1576
Q 761	(B,149,69) Transistor	DTC114EU
Q 762	(B,132,67) Transistor	2SA1615-ZS1
Q 771	(B,38,9) Transistor	UMF5N
Q 781	(B,50,11) Transistor	2SD1664
Q 782	(B,47,6) Transistor	IMD2A
Q 801	(B,20,23) Transistor	2SB1184F5
Q 802	(A,6,24) Transistor	2SD1767
Q 803	(B,23,7) Transistor	UMF5N
Q 804	(B,23,12) Transistor	UMF5N
Q 821	(A,141,103) Transistor	2SB1708
Q 822	(A,143,106) Transistor	DTC114EU
Q 831	(A,168,91) Transistor	2SD2396
Q 832	(B,151,91) Transistor	IMD2A
Q 833	(A,157,90) Transistor	2SD1767
Q 841	(B,114,25) Transistor	DTC124EUA
Q 842	(B,112,61) Transistor	DTC124EUA
Q 843	(B,121,25) Transistor	2SA1797
Q 844	(B,115,64) Transistor	2SA1797
Q 845	(B,143,76) Transistor	2SB1184F5
Q 846	(A,145,78) Transistor	2SD1767
Q 847	(A,118,44) Transistor	2SJ529S
Q 848	(A,131,47) Transistor	2SD1767
Q 849	(B,117,49) Transistor	DTC124EUA
Q 901	(A,142,31) Transistor	2SJ529S
Q 902	(A,142,21) Transistor	2SJ529S
Q 931	(B,129,8) Transistor	2SA1834F5

Circuit Symbol and No.		Part No.
Q 932	(B,132,18) Transistor	DTC124EUA
D 121	(B,69,10) Diode	1SS355
D 122	(B,64,10) Diode	1SS355
D 161	(B,69,43) Diode Network	DA204U
D 162	(B,65,46) Diode Network	DA204U
D 163	(B,72,113) Diode	UDZS5R6(B)
D 164	(B,69,112) Diode	UDZS5R6(B)
D 165	(B,40,105) Diode	UDZS5R6(B)
D 166	(B,35,106) Diode	HZU2R7(B1)
D 167	(B,35,104) Diode	HZU2R7(B1)
D 168	(B,42,123) Diode	HZU2R7(B1)
D 169	(B,48,123) Diode	HZU2R7(B1)
D 170	(A,45,129) Diode	HZU2R7(B1)
D 171	(A,49,129) Diode	HZU2R7(B1)
D 172	(B,31,106) Diode	HZU2R7(B1)
D 173	(B,31,104) Diode	HZU2R7(B1)
D 174	(B,44,125) Diode	HZU2R7(B1)
D 175	(B,51,125) Diode	HZU2R7(B1)
D 176	(B,74,117) Diode	UDZS5R6(B)
D 177	(B,75,114) Diode	UDZS5R6(B)
D 241	(B,145,89) Diode	DAN202U
D 261	(B,101,106) Diode	DAP202K
D 262	(B,114,106) Diode	DAP202K
D 263	(B,96,106) Diode	DAP202K
D 281	(A,139,99) Diode	RSX201L-30
D 282	(B,145,85) Diode	DAN202U
D 283	(B,128,90) Diode	UDZS8R2(B)
D 284	(B,151,98) Diode	1SS355
D 291	(B,86,106) Diode	DAN202U
D 351	(A,104,28) Diode	DAP202K
D 352	(B,85,40) Diode	1SS355
D 421	(A,69,82) Diode	UDZS3R9(B)
D 481	(A,92,140) Diode	HZU9R1(B2)
D 482	(A,88,140) Diode	HZU6R8(B2)
D 483	(A,88,142) Diode	HZU8R2(B2)
D 651	(B,65,65) Diode	1SS355
D 701	(A,104,125) Diode	5KP24A
D 702	(A,120,107) Diode	HZU7L(C3)
D 711	(A,126,106) Diode	HZU7L(A1)
D 721	(A,116,66) Diode	1SS355
D 731	(A,138,77) Diode	UDZS6R8(B)
D 741	(B,101,56) Diode	DAN202U
D 751	(B,111,52) Diode	DAN202U
D 761	(A,70,33) Diode	RSX201L-30
D 781	(B,46,10) Diode	HZU10(B1)
D 791	(B,126,141) Diode	S1G-6904G2P
D 792	(B,121,139) Diode	S1G-6904G2P
D 801	(A,9,18) Diode	UDZS18(B)
D 802	(A,10,29) Diode	1SR154-400
D 821	(B,32,35) Diode	1SR154-400
D 822	(B,37,34) Diode	1SR154-400
D 823	(B,43,36) Diode	1SR154-400
D 831	(B,152,86) Diode	HZU9R1(B3)
D 832	(A,161,87) Diode	UDZS5R6(B)
D 841	(A,118,38) Diode	RSX201L-30
D 842	(A,141,76) Diode	UDZS18(B)
D 843	(A,125,49) Diode	MA111
D 844	(A,166,69) Diode	RSX201L-30
D 845	(A,168,43) Diode	RSX201L-30
D 901	(B,141,35) Diode	RSX201L-30

A B C D E F

Circuit Symbol and No.			Part No.
D 902	(B,140,24)	Diode	RSX201L-30
D 903	(A,163,8)	Diode	RSX201L-30
D 904	(A,163,4)	Diode	RSX201L-30
D 905	(B,141,39)	Diode	RSX201L-30
D 961	(B,48,26)	Diode	RB060L-40
ZNR401	(A,5,101)	Surge Protector	RCCA-201Q31UA-PI
L 101	(A,63,21)	Inductor	CTF1395
L 102	(B,62,22)	Inductor	CTF1395
L 103	(A,68,20)	Inductor	CTF1306
L 104	(B,67,16)	Inductor	CTF1306
L 141	(A,120,74)	Inductor	LCTAW2R2J2520
L 171	(A,23,112)	Chip Ferrite Bead	CTF1399
L 201	(A,85,86)	Inductor	LCTAW2R2J2520
L 301	(A,50,110)	Chip Ferrite Bead	CTF1399
L 302	(A,54,116)	Chip Ferrite Bead	CTF1399
L 303	(B,69,99)	Chip Ferrite Bead	CTF1399
L 331	(A,102,76)	Inductor	LCTAW101J2520
L 352	(A,91,21)	Inductor	CTF1473
L 353	(A,88,21)	Inductor	CTF1473
L 354	(A,95,10)	Chip Ferrite Bead	CTF1399
L 355	(B,87,29)	Chip Ferrite Bead	CTF1399
L 356	(B,85,36)	Inductor	CTF1305
L 357	(B,107,30)	Inductor	CTF1305
L 381	(A,56,120)	Inductor	CTF1378
L 401	(A,8,104)	Chip Coil	LCTAW4R7J2520
L 402	(A,53,52)	Chip Coil	LCTAW1R0J2520
L 403	(A,52,85)	Chip Coil	LCTAW1R0J2520
L 404	(B,21,62)	Inductor	CTF1473
L 405	(B,29,26)	Inductor	CTF1473
L 421	(B,73,78)	Chip Ferrite Bead	CTF1399
L 451	(A,105,101)	Inductor	LCTAW150J2520
L 452	(B,82,107)	Chip Ferrite Bead	CTF1399
L 453	(A,109,117)	Inductor	CTF1383
L 601	(A,71,61)	Inductor	CTF1473
L 602	(B,76,43)	Inductor	LCTAW2R2J2520
L 603	(B,68,28)	Inductor	CTF1305
L 731	(A,129,96)	Inductor	CTF1295
L 741	(A,105,63)	Inductor	LCTAW2R2J2520
L 751	(A,109,58)	Inductor	LCTAW2R2J2520
L 761	(A,146,69)	Inductor	CTH1262
L 762	(A,77,27)	Coil	CTH1267
L 811	(B,19,7)	Inductor	CTF1306
L 841	(A,114,32)	Coil	CTH1295
L 842	(A,162,58)	Coil	CTH1295
L 843	(A,133,60)	Chip Coil	LCTAW100J2520
L 901	(A,142,43)	Coil	CTH1303
L 902	(A,142,13)	Coil	CTH1303
L 903	(A,161,26)	Inductor	CTH1254
L 961	(B,35,30)	Inductor	CTF1383
X 601	(A,80,35)	Crystal Resonator 18.874 MHz	CSS1622
VR841	(A,115,52)	Semi-fixed 10 kΩ(B)	CCP1396
⚠FU101	(A,72,20)	Fuse 1.25 A	CEK1281
⚠FU161	(A,20,108)	Fuse 3 A	CEK1286
⚠FU162	(A,20,107)	Fuse 3 A	CEK1286
⚠FU261	(A,97,129)	Fuse 3 A	CEK1286
⚠FU351	(A,127,12)	Fuse 3 A	CEK1286
⚠FU352	(A,101,8)	Fuse 3 A	CEK1286
⚠FU353	(A,101,6)	Fuse 3 A	CEK1286
⚠FU441	(A,82,113)	Fuse 750 mA	CEK1279
⚠FU442	(A,82,122)	Fuse 750 mA	CEK1279

Circuit Symbol and No.			Part No.
⚠FU471	(A,42,15)	Fuse 2 A	CEK1284
⚠FU481	(A,87,138)	Fuse 1 A	CEK1280
⚠FU701	(B,126,134)	Fuse 3 A	CEK1286
⚠FU762	(A,141,62)	Fuse 1.75 A	CEK1283
⚠FU841	(A,121,29)	Fuse 1.25 A	CEK1281
⚠FU842	(B,124,27)	Fuse 750 mA	CEK1279
⚠FU843	(A,168,51)	Fuse 3 A	CEK1286
⚠FU844	(B,27,21)	Fuse 750 mA	CEK1279
⚠FU901	(A,157,6)	Fuse 4 A	CEK1288
Y 401	(A,8,98)	FM/AM Tuner Unit	CWE1651
BZ601	(A,22,10)	Buzzer	CPV1063

RESISTORS

		Part No.
R 101	(A,80,21)	RS1/16S101J
R 102	(A,75,21)	RS1/16S101J
R 103	(A,77,21)	RS1/16S101J
R 104	(A,78,21)	RS1/16S101J
R 105	(A,58,22)	RS1/16S0R0J
R 106	(A,56,25)	RS1/16S101J
R 107	(B,60,14)	RS1/16S101J
R 109	(A,60,22)	RS1/16S0R0J
R 110	(B,60,21)	RS1/16S0R0J
R 121	(B,62,10)	RS1/16S103J
R 122	(B,62,9)	RS1/16S223J
R 123	(B,63,7)	RS1/16S473J
R 124	(B,68,10)	RS1/16S472J
R 125	(B,66,10)	RS1/16S472J
R 126	(B,75,7)	RS1/16S473J
R 127	(B,73,10)	RS1/16S473J
R 141	(A,121,91)	RS1/16S150J
R 142	(A,118,91)	RS1/16S470J
R 143	(A,121,89)	RS1/16S101J
R 144	(A,118,89)	RS1/16S101J
R 145	(A,113,100)	RS1/16S222J
R 146	(A,117,107)	RS1/16S332J
R 147	(A,116,105)	RS1/16S562J
R 148	(A,117,76)	RS1/16S102J
R 149	(A,77,82)	RS1/16S181J
R 150	(A,87,73)	RS1/16S181J
R 151	(A,77,84)	RS1/16S223J
R 152	(A,87,75)	RS1/16S223J
R 153	(A,77,85)	RS1/16S102J
R 154	(A,86,77)	RS1/16S102J
R 161	(A,32,116)	RS1/16S681J
R 162	(B,70,50)	RS1/16S473J
R 163	(A,32,130)	RS1/16S681J
R 164	(B,79,63)	RS1/16S473J
R 165	(B,82,66)	RS1/16S473J
R 166	(B,77,66)	RS1/16S473J
R 171	(B,31,125)	RS1/16S472J
R 172	(B,32,119)	RS1/16S472J
R 173	(B,31,114)	RS1/16S472J
R 174	(B,32,121)	RS1/16S472J
R 175	(B,32,131)	RS1/16S472J
R 176	(B,32,108)	RS1/16S472J
R 177	(B,34,113)	RS1/16S472J
R 178	(B,34,114)	RS1/16S472J
R 179	(B,34,127)	RS1/16S472J
R 180	(B,34,125)	RS1/16S472J

Circuit Symbol and No.		Part No.
R 181	(B,25,112)	RS1/16S472J
R 182	(B,32,123)	RS1/16S472J
R 183	(B,32,129)	RS1/16S472J
R 184	(B,32,116)	RS1/16S472J
R 185	(B,32,111)	RS1/16S472J
R 186	(B,25,128)	RS1/16S472J
R 187	(B,37,113)	RS1/16S750J
R 188	(A,20,124)	RS1/16S102J
R 189	(B,37,114)	RS1/16S750J
R 190	(B,37,127)	RS1/16S750J
R 191	(B,37,125)	RS1/16S750J
R 192	(A,23,122)	RS1/16S272J
R 193	(A,23,124)	RS1/16S472J
R 194	(A,38,130)	RS1/16S750J
R 201	(B,81,83)	RS1/16S0R0J
R 202	(B,86,83)	RS1/16S0R0J
R 203	(B,74,90)	RS1/16S0R0J
R 204	(B,92,89)	RS1/16S0R0J
R 205	(B,77,103)	RS1/16S0R0J
R 206	(B,93,99)	RS1/16S0R0J
R 207	(B,75,99)	RS1/16S0R0J
R 208	(B,91,99)	RS1/16S0R0J
R 209	(B,74,99)	RS1/16S0R0J
R 210	(B,89,103)	RS1/16S0R0J
R 211	(A,70,95)	RAB4C102J
R 235	(A,70,73)	RS1/16S224J
R 236	(A,70,72)	RS1/16S224J
R 237	(A,70,75)	RS1/16S104J
R 238	(A,64,74)	RS1/16S102J
R 239	(A,61,72)	RS1/16S103J
R 240	(A,61,74)	RS1/16S682J
R 241	(B,142,95)	RS1/16S0R0J
R 242	(B,148,94)	RS1/16S0R0J
R 243	(B,139,96)	RS1/16S0R0J
R 244	(B,146,94)	RS1/16S0R0J
R 246	(A,131,81)	RS1/16S103J
R 248	(A,132,83)	RS1/16S103J
R 251	(A,133,82)	RS1/16S221J
R 252	(A,137,109)	RS1/16S103J
R 253	(A,140,109)	RS1/16S473J
R 254	(B,159,97)	RS1/16S101J
R 261	(B,110,102)	RS1/16S820J
R 262	(B,118,101)	RS1/16S820J
R 263	(B,103,112)	RS1/16S223J
R 264	(B,101,117)	RS1/16S223J
R 265	(B,101,113)	RS1/16S471J
R 266	(B,103,116)	RS1/16S471J
R 267	(B,120,105)	RS1/16S820J
R 268	(B,110,104)	RS1/16S820J
R 269	(B,120,104)	RS1/16S223J
R 270	(B,107,104)	RS1/16S223J
R 271	(B,118,104)	RS1/16S471J
R 272	(B,107,103)	RS1/16S471J
R 273	(B,114,100)	RS1/16S820J
R 274	(B,120,99)	RS1/16S820J
R 275	(B,97,112)	RS1/16S223J
R 276	(B,95,117)	RS1/16S223J
R 277	(B,95,113)	RS1/16S471J
R 278	(B,97,116)	RS1/16S471J
R 281	(A,131,89)	RS1/16S222J

Circuit Symbol and No.		Part No.
R 282	(B,151,100)	RS1/16S103J
R 283	(B,132,89)	RS1/16S104J
R 284	(B,151,96)	RS1/16S101J
R 285	(B,132,91)	RS1/16S473J
R 287	(B,111,116)	RS1/16S0R0J
R 288	(B,107,115)	RS1/16S0R0J
R 291	(B,88,115)	RS1/16S222J
R 301	(A,42,111)	RS1/16S473J
R 302	(A,46,113)	RS1/16S101J
R 303	(A,45,110)	RS1/16S473J
R 304	(B,43,104)	RS1/16S473J
R 305	(B,57,109)	RS1/16S103J
R 306	(B,43,105)	RS1/16S472J
R 307	(B,46,109)	RS1/16S472J
R 308	(B,54,109)	RS1/16S103J
R 309	(A,59,107)	RS1/16S104J
R 310	(B,48,107)	RS1/16S473J
R 311	(B,51,107)	RS1/16S473J
R 312	(B,58,104)	RS1/16S102J
R 313	(B,56,116)	RS1/16S473J
R 314	(B,61,106)	RS1/16S473J
R 315	(B,57,114)	RS1/16S821J
R 316	(A,64,98)	RS1/16S103J
R 317	(A,64,97)	RS1/16S103J
R 318	(A,66,98)	RS1/16S103J
R 319	(A,66,101)	RS1/16S103J
R 320	(A,64,95)	RS1/16S103J
R 321	(B,67,102)	RS1/16S103J
R 322	(B,67,95)	RS1/16S103J
R 323	(A,64,101)	RS1/16S103J
R 331	(B,97,88)	RS1/16S223J
R 351	(B,94,15)	RS1/16S102J
R 353	(A,90,20)	RS1/16S0R0J
R 354	(A,98,31)	RS1/16S101J
R 358	(B,83,26)	RS1/16S332J
R 359	(B,90,37)	RS1/16S102J
R 360	(B,90,15)	RS1/16S102J
R 361	(A,94,8)	RS1/16S104J
R 363	(B,87,40)	RS1/16S104J
R 365	(A,86,29)	RS1/16S101J
R 366	(A,83,29)	RS1/16S102J
R 367	(B,88,15)	RS1/16S102J
R 368	(A,91,8)	RS1/16S102J
R 369	(A,96,21)	RS1/16S102J
R 370	(A,94,21)	RS1/16S102J
R 371	(B,93,15)	RS1/16S102J
R 372	(B,91,15)	RS1/16S102J
R 373	(B,99,26)	RS1/16S102J
R 374	(B,91,21)	RS1/16S102J
R 375	(B,87,34)	RS1/16S473J
R 381	(A,62,129)	RS1/16S221J
R 382	(A,59,127)	RS1/16S151J
R 383	(A,57,126)	RS1/16S471J
R 384	(A,57,125)	RS1/16S473J
R 385	(A,54,121)	RS1/16S104J
R 386	(A,58,129)	RS1/16S181J
R 387	(A,55,129)	RS1/16S151J
R 388	(B,59,124)	RS1/16S103J
R 389	(B,58,124)	RS1/16S332J
R 401	(B,21,57)	RS1/16S681J

Circuit Symbol and No.			Part No.
R	402	(B,18,79)	RS1/16S681J
R	403	(B,18,81)	RS1/16S681J
R	404	(B,18,82)	RS1/16S681J
R	405	(B,18,84)	RS1/16S681J
R	406	(B,18,78)	RS1/16S681J
R	408	(B,46,62)	RS1/16S0R0J
R	423	(A,65,86)	RS1/16S103J
R	424	(A,68,78)	RS1/16S103J
R	425	(B,70,88)	RS1/16S103J
R	426	(B,71,77)	RS1/16S103J
R	427	(B,63,78)	RS1/16S103J
R	428	(B,64,78)	RS1/16S103J
R	429	(B,64,84)	RS1/16S103J
R	430	(B,64,81)	RS1/16S103J
R	431	(A,71,82)	RS1/16S681J
R	441	(A,97,112)	RS1/16S473J
R	442	(B,64,52)	RS1/16S473J
R	443	(B,70,52)	RS1/16S473J
R	451	(A,75,113)	RS1/16S472J
R	452	(A,78,113)	RS1/16S472J
R	453	(B,69,109)	RS1/16S472J
R	454	(B,77,112)	RS1/16S472J
R	455	(A,72,113)	RS1/16S102J
R	456	(B,68,107)	RS1/16S101J
R	457	(A,69,110)	RS1/16S272J
R	458	(A,70,112)	RS1/16S392J
R	460	(B,70,105)	RS1/16S101J
R	461	(A,107,117)	RS1/16S560J
R	462	(A,108,115)	RS1/16S150J
R	463	(A,81,105)	RS1/16S473J
R	466	(A,81,109)	RS1/16S333J
R	481	(B,88,132)	RS1/16S271J
R	482	(B,88,135)	RS1/16S271J
R	483	(B,88,137)	RS1/16S271J
R	484	(B,86,137)	RS1/16S103J
R	485	(B,85,135)	RS1/16S103J
R	601	(B,92,68)	RS1/16S473J
R	602	(B,86,68)	RS1/16S104J
R	603	(B,86,67)	RS1/16S104J
R	605	(A,87,70)	RS1/16S473J
R	606	(A,100,66) (RE, RD, RC)	RS1/16S473J
R	607	(A,100,68) (RE, RD, RI)	RS1/16S473J
R	608	(A,96,67)	RS1/16S473J
R	609	(A,94,67)	RS1/16S102J
R	610	(A,95,69)	RS1/16S102J
R	611	(A,90,70)	RS1/16S102J
R	612	(A,102,57)	RS1/16S104J
R	613	(A,98,66) (UC, RE, RI)	RS1/16S473J
R	614	(A,98,69) (UC, RC)	RS1/16S473J
R	615	(B,88,63)	RAB4C101J
R	616	(B,79,56)	RS1/16S473J
R	617	(A,69,60)	RS1/16S102J
R	618	(A,69,58)	RS1/16S0R0J
R	619	(B,90,58)	RS1/16S221J
R	620	(B,96,62)	RS1/16S681J
R	621	(A,68,56)	RS1/16S221J
R	622	(A,72,56)	RS1/16S0R0J
R	623	(A,72,55)	RS1/16S0R0J
R	624	(A,74,69)	RS1/16S221J
R	625	(B,98,53)	RS1/16S473J

Circuit Symbol and No.			Part No.
R	626	(A,71,53)	RS1/16S102J
R	627	(A,69,52)	RS1/16S102J
R	628	(B,74,55)	RS1/16S473J
R	629	(B,74,54)	RS1/16S473J
R	630	(A,102,51)	RS1/16S104J
R	631	(B,79,50)	RS1/16S473J
R	632	(B,65,49)	RS1/16S473J
R	633	(B,113,58)	RS1/16S473J
R	634	(A,72,49)	RAB4C102J
R	635	(B,74,45)	RS1/16S473J
R	636	(B,91,54)	RS1/16S681J
R	637	(B,91,53)	RS1/16S681J
R	638	(B,101,48)	RS1/16S104J
R	639	(A,103,40)	RAB4C681J
R	640	(B,73,49)	RS1/16S102J
R	641	(B,77,49)	RS1/16S104J
R	642	(B,103,40)	RS1/16S473J
R	643	(A,84,36)	RS1/16S221J
R	644	(B,88,49)	RS1/16S681J
R	645	(B,88,48)	RS1/16S681J
R	646	(B,68,30)	RS1/16S102J
R	649	(A,99,37)	RS1/16S102J
R	650	(A,87,34)	RS1/16S102J
R	651	(A,86,37)	RS1/16S102J
R	652	(B,94,49)	RS1/16S104J
R	653	(B,86,46)	RS1/16S472J
R	654	(B,85,43)	RS1/16S473J
R	655	(A,81,78)	RS1/16S472J
R	656	(A,79,78)	RS1/16S472J
R	657	(B,67,62)	RS1/16S102J
R	659	(B,67,65)	RS1/16S104J
R	660	(A,98,37)	RS1/16S471J
R	661	(A,74,78)	RS1/16S103J
R	662	(A,79,68)	RS1/16S221J
R	664	(B,85,62)	RS1/16S473J
R	666	(A,84,64)	RS1/16S102J
R	701	(A,106,67)	RS1/16S473J
R	702	(A,120,102)	RS1/16S104J
R	703	(A,120,103)	RS1/16S473J
R	711	(A,123,102)	RS1/16S103J
R	712	(A,123,104)	RS1/16S473J
R	713	(A,122,105)	RS1/16S472J
R	721	(A,113,66)	RS1/16S103J
R	731	(A,120,65)	RS1/16S473J
R	732	(A,133,76)	RS1/16S103J
R	733	(A,135,77)	RS1/16S103J
R	734	(A,135,78)	RS1/16S103J
R	741	(B,104,52)	RS1/16S102J
R	742	(B,106,53)	RS1/16S473J
R	743	(B,106,56)	RS1/16S473J
R	744	(A,105,61)	RS1/16S103J
R	751	(B,113,53)	RS1/16S102J
R	752	(B,108,56)	RS1/16S472J
R	753	(B,108,53)	RS1/16S472J
R	754	(A,111,62)	RS1/16S153J
R	761	(B,145,70)	RS1/16S301J
R	763	(B,140,69)	RS1/16S301J
R	765	(B,141,66)	RS1/16S153J
R	771	(B,32,10)	RS1/16S103J
R	772	(B,34,11)	RS1/16S332J

Circuit Symbol and No.		Part No.
R 781	(B,52,7)	RS1/16S391J
R 782	(B,54,9)	RS1/16S391J
R 801	(B,12,22)	RS1/16S471J
R 802	(A,15,20)	RS1/16S2R2J
R 803	(A,15,17)	RS1/16S2R2J
R 804	(A,13,20)	RS1/16S2R2J
R 805	(A,13,17)	RS1/16S2R2J
R 806	(A,10,23)	RS1/16S222J
R 807	(B,21,7)	RS1/16S103J
R 808	(B,22,9)	RS1/16S332J
R 809	(B,21,12)	RS1/16S103J
R 810	(B,22,14)	RS1/16S332J
R 821	(A,161,100)	RS1/16S102J
R 822	(A,140,108)	RS1/16S471J
R 823	(A,140,106)	RS1/16S471J
R 825	(A,138,103)	RS1/16S103J
R 831	(B,155,90)	RS1/16S391J
R 832	(B,152,88)	RS1/16S391J
R 833	(B,155,91)	RS1/16S391J
R 834	(A,161,91)	RS1/16S152J
R 841	(B,116,25)	RS1/16S221J
R 842	(B,112,65)	RS1/16S221J
R 843	(B,117,25)	RS1/16S103J
R 844	(B,115,68)	RS1/16S103J
R 845	(B,123,54)	RS1/16S1002D
R 846	(B,120,53)	RS1/16S2701D
R 848	(B,123,57)	RS1/16S2701D
R 849	(B,123,56)	RS1/16S3302D
R 850	(B,136,74)	RS1/16S220J
R 851	(A,165,77)	RS1/16S2R2J
R 852	(A,165,74)	RS1/16S2R2J
R 853	(A,167,77)	RS1/16S2R2J
R 854	(A,167,74)	RS1/16S2R2J
R 855	(B,123,47)	RS1/16S0R0J
R 856	(A,148,77)	RS1/16S102J
R 857	(A,127,48)	RS1/16S272J
R 858	(B,122,59)	RS1/16S6801D
R 859	(A,128,51)	RS1/16S221J
R 860	(A,120,61)	RS1/16S1502D
R 861	(A,119,50)	RS1/16S6801D
R 862	(B,123,49)	RS1/16S2701D
R 863	(B,123,53)	RS1/16S1203D
R 864	(B,120,50)	RS1/16S5602D
R 865	(B,125,53)	RS1/16S3302D
R 867	(A,126,62)	RS1/16S3302D
R 869	(B,122,33)	RS1/16S2200F
R 870	(B,123,35)	RS1/16S1002D
R 871	(B,126,31)	RS1/16S0R0J
R 872	(B,123,31)	RS1/16S1102D
R 873	(B,131,31)	RS1/16S102J
R 874	(A,123,63)	RS1/16S0R0J
R 901	(A,154,45)	RS1/16S1102D
R 903	(A,154,39)	RS1/16S0R0J
R 904	(A,153,12)	RS1/16S0R0J
R 906	(A,154,5)	RS1/16S1202D
R 907	(A,164,10)	RS1/16S0R0J
R 908	(A,166,11)	RS1/16S0R0J
R 911	(A,154,48)	RS1/16S1001D
R 912	(A,154,7)	RS1/16S6200D
R 913	(B,142,51)	RS1/16S271J
R 914	(B,139,51)	RS1/16S271J
R 915	(B,136,51)	RS1/16S271J
R 916	(B,142,7)	RS1/16S221J
R 917	(B,139,7)	RS1/16S221J
R 931	(B,134,13)	RS1/16S101J
R 932	(B,135,10)	RS1/16S103J
R 933	(B,134,15)	RS1/16S101J
R 934	(B,134,12)	RS1/16S101J
R 935	(B,134,16)	RS1/16S101J
R 941	(B,139,61)	RS1/16S68R0D
R 942	(B,142,61)	RS1/16S3901D
R 943	(B,132,60)	RS1/16S0R0J
R 944	(B,136,61)	RS1/16S1202D
R 945	(B,126,60)	RS1/16S102J
R 948	(A,138,106)	RS1/16S471J
R 949	(A,137,108)	RS1/16S471J
R 950	(A,149,31)	RS1/16S0R0J
R 951	(A,149,18)	RS1/16S0R0J

CAPACITORS

C 101	(A,56,19)	CKSRYB104K16
C 102	(B,68,20)	CKSRYB104K16
C 103	(B,81,12)	CKSRYB104K16
C 104	(B,69,22)	CKSRYB104K16
C 105	(A,65,18)	CKSRYB104K16
C 106	(B,65,24)	CKSRYB104K16
C 108	(B,72,16)	CKSRYB104K16
C 109	(B,63,34)	CKSRYB102K50
C 112	(A,40,20)	CKSRYB104K16
C 121	(B,67,13)	CKSRYB103K50
C 122	(B,67,14)	CKSRYB103K50
C 141	(A,117,100)	CKSRYB104K16
C 144	(A,120,77)	CKSRYB104K16
C 161	(B,74,39)	CKSRYB104K16
C 162	(B,80,61)	CKSRYB104K16
C 163	(A,21,130)	CKSRYB104K16
C 165	(A,49,119)	CKSRYB104K16
C 171	(B,36,119)	CKSYB106K6R3
C 172	(B,36,131)	CKSYB106K6R3
C 173	(B,36,121)	CKSYB106K6R3
C 174	(B,31,127)	CCSRCH6R0D50
C 175	(B,31,113)	CCSRCH6R0D50
C 176	(B,36,108)	CKSYB106K6R3
C 177	(B,25,114)	CCSRCH6R0D50
C 178	(B,25,126)	CCSRCH6R0D50
C 179	(B,36,111)	CKSYB106K6R3
C 180	(B,36,116)	CKSYB106K6R3
C 181	(B,36,129)	CKSYB106K6R3
C 182	(B,36,123)	CKSYB106K6R3
C 183	(A,20,126)	CKSRYB104K16
C 184	(A,23,126)	CKSRYB102K50
C 185	(B,30,120)	CKSRYB104K16
C 186	(B,21,110)	CKSRYB104K16
C 187	(B,22,114)	CCSRCH101J50
C 201	(B,81,80)	CKSRYB105K10
C 202	(B,86,80)	CKSRYB105K10
C 205	(B,77,83)	CKSRYB224K10
C 206	(B,89,84)	CKSRYB105K10
C 207	(B,82,83)	CKSRYB105K10
C 208	(B,84,83)	CKSRYB105K10

Circuit Symbol and No.		Part No.
C 209	(B,77,84)	CKSRYB105K10
C 210	(B,89,82)	CKSRYB224K10
C 211	(B,77,86)	CKSRYB105K10
C 212	(B,89,86)	CKSRYB105K10
C 213	(A,81,84)	CKSRYB102K50
C 214	(A,83,94)	CEVW470M16
C 215	(A,81,87)	CKSRYB104K16
C 216	(A,91,88)	CKSYB475K10
C 217	(A,76,89)	CKSYB475K10
C 218	(A,91,90)	CKSYB475K10
C 219	(A,76,91)	CKSYB475K10
C 222	(A,91,92)	CKSYB475K10
C 223	(A,76,93)	CKSYB475K10
C 224	(A,91,94)	CKSYB475K10
C 225	(A,76,95)	CKSYB475K10
C 226	(B,93,96)	CCSRCH100D50
C 227	(B,74,96)	CCSRCH100D50
C 228	(B,91,96)	CCSRCH100D50
C 229	(B,75,96)	CCSRCH100D50
C 230	(B,89,101)	CCSRCH100D50
C 231	(B,77,101)	CCSRCH100D50
C 232	(A,91,98)	CEVW100M16
C 233	(B,81,102)	CKSRYB104K16
C 234	(B,80,102)	CKSRYB104K16
C 235	(B,74,91)	CKSRYB104K16
C 236	(B,92,91)	CKSRYB104K16
C 237	(A,64,72)	CKSRYB224K10
C 241	(B,143,97)	CKSRYB105K10
C 242	(B,148,97)	CKSRYB105K10
C 243	(B,141,97)	CKSRYB105K10
C 244	(B,146,97)	CKSRYB105K10
C 245	(B,143,100)	CKSRYB105K10
C 246	(B,148,100)	CKSRYB105K10
C 247	(B,141,100)	CKSRYB105K10
C 248	(B,146,100)	CKSRYB105K10
C 249	(A,138,84)	CEVW330M25
C 250	(A,130,115) 10 µF	CCG1138
C 251	(A,122,115) 1 000 µF/16 V	CCH1428
C 252	(A,150,107) 10 µF	CCG1182
C 253	(A,159,103)	CKSYB475K16
C 254	(A,157,105)	CKSYB475K16
C 255	(B,132,143)	CKSRYB473K50
C 261	(B,114,87) 10 µF	CCG1182
C 262	(B,120,88) 10 µF	CCG1182
C 263	(B,114,89) 10 µF	CCG1182
C 264	(B,120,90) 10 µF	CCG1182
C 265	(B,103,114)	CKSRYB222K50
C 266	(B,101,116)	CKSRYB222K50
C 267	(B,114,92) 10 µF	CCG1182
C 268	(B,120,93) 10 µF	CCG1182
C 269	(B,118,105)	CKSRYB222K50
C 270	(B,105,105)	CKSRYB222K50
C 271	(B,97,114)	CKSRYB222K50
C 272	(B,95,116)	CKSRYB222K50
C 274	(B,106,141)	CKSRYB102K50
C 281	(A,134,93)	CEVW101M16
C 283	(B,151,94) 10 µF	CCG1182
C 285	(A,141,93)	CEVW470M16
C 301	(A,45,112)	CKSRYB105K10
C 302	(A,47,111)	CKSRYB105K10

Circuit Symbol and No.		Part No.
C 305	(A,55,107)	CEVW100M16
C 306	(A,57,115)	CKSRYB104K16
C 307	(B,48,106) 10 µF	CCG1171
C 308	(A,46,109)	CKSRYB104K16
C 309	(B,59,110)	CKSRYB104K16
C 310	(B,57,112)	CKSRYB104K16
C 311	(A,64,93)	CCSRCH101J50
C 312	(B,67,99)	CKSRYB104K16
C 313	(A,64,100)	CCSRCH101J50
C 314	(B,81,104) 10 µF	CCG1182
C 315	(B,72,100) 10 µF	CCG1182
C 331	(B,95,82)	CKSYB475K10
C 332	(B,96,86) 10 µF	CCG1182
C 333	(A,99,88)	CEVW101M10
C 334	(A,96,93)	CKSQYB225K10
C 335	(B,97,90)	CKSQYB225K10
C 336	(A,100,92)	CKSQYB225K10
C 337	(B,97,92)	CKSQYB225K10
C 338	(A,101,94)	CKSQYB225K10
C 339	(B,97,94)	CKSQYB225K10
C 340	(A,94,81)	CEVW100M16
C 341	(A,100,80)	CEVW100M16
C 342	(A,100,83)	CKSRYB105K10
C 343	(A,108,88)	CEVW330M25
C 344	(A,108,80)	CEVW330M25
C 345	(B,98,82)	CKSYB684K16
C 352	(B,99,7)	CKSRYB104K16
C 354	(B,86,23)	CKSYB106K6R3
C 357	(B,91,29)	CKSYB475K10
C 358	(A,92,36)	CKSYB225K16
C 359	(B,92,24)	CKSRYB103K50
C 360	(A,84,24)	CEVW220M6R3
C 361	(A,92,29)	CEVW101M10
C 362	(B,93,37)	CKSRYB104K16
C 363	(B,84,34)	CKSRYB104K16
C 365	(B,107,34)	CKSRYB104K16
C 366	(A,105,23) 56 µF/10 V	CCH1397
C 368	(B,89,7)	CKSRYB104K16
C 369	(B,86,7)	CKSRYB104K16
C 370	(A,108,11)	CKSRYB102K50
C 371	(B,112,13)	CKSRYB102K50
C 372	(B,95,6)	CKSRYB102K50
C 373	(B,105,22)	CKSRYB102K50
C 374	(B,98,7)	CKSRYB102K50
C 381	(A,57,128)	CCSRCH150J50
C 382	(A,61,123)	CEVW100M16
C 383	(A,56,122)	CKSRYB104K16
C 384	(A,58,122)	CKSRYB104K16
C 385	(B,58,131) 4.7 µF	CCG1089
C 387	(B,59,128)	CKSRYB104K16
C 390	(B,87,128)	CKSRYB102K50
C 402	(B,17,54)	CKSYB475K10
C 404	(B,19,54)	CKSRYB103K50
C 405	(B,17,92)	CKSRYB103K50
C 406	(A,54,57)	CEVW470M6R3
C 407	(A,52,93)	CEVW101M16
C 408	(B,18,61)	CKSRYB103K50
C 421	(A,70,88)	CCSRCH470J50
C 422	(A,71,77)	CCSRCH470J50
C 423	(A,64,84)	CKSRYB474K10

Circuit Symbol and No.	Part No.	Circuit Symbol and No.	Part No.
C 424 (A,65,78)	CKSRYB474K10	C 808 (A,10,10) 2 200 µF/16 V	CCH1405
C 426 (B,73,83)	CKSRYB105K10	C 809 (A,10,20)	CKSRYB104K25
C 427 (A,66,82)	CKSYB475K16	C 814 (B,19,4)	CKSRYB104K16
C 428 (A,64,82)	CKSRYB103K50	C 821 (A,150,93)	CEVW101M10
C 429 (B,17,40)	CKSRYB474K10	C 822 (A,144,102)	CKSRYB103K50
C 430 (B,22,40)	CKSRYB474K10	C 823 (A,150,101)	CEVW101M16
C 431 (B,66,84)	CCSRCH470J50	C 825 (A,53,47)	CEVW220M6R3
C 432 (B,66,81)	CCSRCH470J50	C 826 (B,35,51)	CKSRYB103K50
C 442 (A,83,121)	CKSRYB104K16	C 827 (B,37,37)	CKSYB475K10
C 443 (B,81,114)	CKSRYB104K16	C 828 (B,36,39)	CKSRYB104K16
C 451 (B,68,109)	CCSRCH4R0D50	C 829 (A,144,84)	CKSRYB102K50
C 452 (A,74,113)	CKSRYB104K16	C 831 (B,157,93) 10 µF	CCG1182
C 453 (A,76,108)	CEVW101M10	C 832 (B,155,88)	CKSRYB104K16
C 454 (A,86,104) 10 µF	CCG1171	C 833 (A,154,87)	CKSRYB104K16
C 456 (A,64,108)	CEVW100M16	C 834 (A,149,85)	CEVW470M6R3
C 457 (A,72,101)	CEVW101M10	C 835 (A,157,86)	CKSRYB104K16
C 458 (B,73,106)	CKSRYB104K16	C 841 (B,121,64)	CKSYB106K6R3
C 459 (A,103,116)	CEVW221M4	C 842 (B,121,66)	CKSRYB103K50
C 460 (A,95,107)	CEVW221M4	C 843 (B,120,54)	CKSRYB103K50
C 461 (A,102,107)	CEVW221M4	C 844 (A,124,34) 470 µF/6.3 V	CCH1437
C 471 (A,40,13)	CKSRYB104K16	C 845 (A,156,79) 3 300 µF/16 V	CCH1486
C 481 (A,82,131)	CKSRYB103K50	C 846 (A,126,42)	CKSYB225K16
C 482 (A,83,135)	CEVW100M16	C 847 (A,150,76)	CKSRYB104K25
C 483 (B,81,135)	CKSRYB103K50	C 848 (A,116,57)	CKSYB475K10
C 601 (A,72,63)	CKSRYB103K50	C 849 (B,118,56)	CCSRCH121J50
C 604 (A,74,61)	CKSRYB105K10	C 850 (B,124,49)	CKSRYB103K50
C 605 (A,102,60)	CKSRYB104K16	C 851 (B,127,53)	CKSRYB104K16
C 607 (A,77,33)	CCSRCH7R0D50	C 852 (A,130,57)	CKSRYB104K16
C 608 (A,81,33)	CCSRCH7R0D50	C 853 (A,134,56)	CKSYB475K16
C 610 (B,76,46)	CKSRYB105K10	C 854 (A,151,58)	CEHAZL471M16
C 615 (B,65,29)	CKSRYB104K16	C 855 (B,165,58)	CKSYB225K16
C 616 (A,73,61)	CKSRYB104K16	C 856 (A,161,48)	CEHAZL471M16
C 617 (B,107,45)	CKSRYB104K16	C 857 (B,111,28) 22 µF	CCG1178
C 651 (A,67,64)	CEVW2R2M50	C 858 (B,116,30)	CKSRYB102K50
C 652 (A,67,61)	CKSRYB104K16	C 859 (B,128,31)	CKSRYB105K10
C 661 (A,83,70)	CKSRYB105K6R3	C 860 (A,141,78)	CKSRYB104K16
C 702 (A,116,121)	CKSRYB104K25	C 861 (A,128,62)	CKSRYB104K25
C 711 (B,131,116)	CKSRYB104K16	C 862 (A,132,56)	CKSYB475K10
C 721 (A,113,64)	CKSRYB105K10	C 871 (A,118,21)	CKSRYB104K16
C 722 (B,129,116)	CKSRYB104K16	C 901 (A,143,54)	CKSYB475K16
C 731 (A,135,75)	CKSRYB104K16	C 902 (A,141,50) 220 µF/10 V	CCH1409
C 732 (B,137,98)	CKSRYB104K16	C 903 (A,145,26)	CKSYB225K16
C 741 (B,136,116)	CKSRYB104K16	C 904 (A,161,37)	CEHAZL471M16
C 742 (A,109,61)	CKSRYB103K50	C 905 (A,145,36)	CKSYB225K16
C 751 (B,135,116)	CKSRYB104K16	C 907 (A,142,5) 470 µF/6.3 V	CCH1437
C 761 (B,126,67)	CKSRYB104K16	C 908 (B,162,28)	CKSYB475K16
C 764 (A,159,68) 2 200 µF/16 V	CCH1405	C 909 (A,161,16) 3 300 µF/16 V	CCH1486
C 765 (A,70,26)	CEVW101M16	C 931 (B,129,17)	CKSRYB105K10
C 771 (B,40,9)	CKSRYB104K16	C 941 (B,132,57)	CCSRCH102J50
C 772 (B,34,8)	CKSRYB102K50	C 942 (B,130,57) 22 µF	CCG1178
C 781 (B,50,15) 10 µF	CCG1182	C 943 (B,131,54)	CKSRYB474K10
C 782 (B,44,10)	CKSRYB104K16	C 961 (A,40,26) 0.22 µF/3.5 V	CCL1058
C 783 (B,54,14)	CKSYB475K16	C 962 (B,45,27)	CKSQYB225K10
C 791 (B,123,134)	CKSQYB104K50	C 963 (B,35,27)	CKSRYB105K10
C 801 (B,26,18)	CKSYB475K10	C 964 (B,34,27)	CKSRYB102K50
C 802 (B,24,16)	CKSRYB102K50	C 966 (A,36,130)	CKSRYB471K50
C 803 (A,24,20)	CEVW101M10	C 973 (A,55,84)	CKSRYB102K50
C 805 (A,21,29)	CKSRYB103K50	C 976 (B,48,84)	CKSRYB102K50
C 806 (B,10,21)	CKSRYB103K50	C 977 (A,51,75)	CKSRYB104K16
C 807 (A,17,25)	CEVW101M16	C 986 (A,50,41)	CKSRYB102K50

Circuit Symbol and No.			Part No.
C 987	(B,42,64)		CKSRYB102K50

C

Unit Number : CWN1685(UC)
Unit Name : AV Selector Unit

MISCELLANEOUS

IC 2001	(A,41,27)	IC	CXA2089Q
IC 2101	(A,67,49)	IC	NJM2505F
IC 2102	(A,61,49)	IC	NJM2505F
IC 2201	(A,37,8)	IC	NJM4558V
IC 2202	(A,64,8)	IC	NJM4558V
IC 2203	(A,25,8)	IC	NJM2068V
IC 2204	(A,53,8)	IC	NJM2068V
IC 2301	(A,78,34)	IC	NJM4558V
IC 2302	(A,96,38)	IC	NJM4558V
IC 2303	(A,67,34)	IC	NJM2068V
IC 2304	(A,96,27)	IC	NJM2068V
IC 2401	(A,19,44)	IC	NJM2505F
IC 2501	(A,52,52)	IC	NJM2505F
IC 2601	(A,51,39)	IC	NJM2505F
IC 2701	(A,11,20)	IC	NJM4558V
IC 2702	(A,14,41)	IC	NJM4558V
IC 2703	(A,22,20)	IC	NJM2068V
IC 2704	(A,14,31)	IC	NJM2068V
Q 2001	(A,41,54)	Transistor	2SC4081
Q 2002	(B,38,52)	Transistor	2SA1577
D 2191	(B,76,64)	Diode	HZU2R7(B1)
D 2192	(B,79,60)	Diode	HZU2R7(B1)
D 2193	(B,70,62)	Diode	HZU2R7(B1)
D 2194	(B,70,59)	Diode	HZU2R7(B1)
D 2201	(B,84,69)	Diode	UDZS5R6(B)
D 2202	(B,84,67)	Diode	UDZS5R6(B)
D 2203	(B,90,69)	Diode	UDZS5R6(B)
D 2204	(B,90,67)	Diode	UDZS5R6(B)
D 2205	(B,20,12)	Diode	UDZS4R7(B)
D 2206	(B,47,11)	Diode	UDZS4R7(B)
D 2301	(A,89,49)	Diode	UDZS5R6(B)
D 2302	(B,90,48)	Diode	UDZS5R6(B)
D 2303	(A,87,46)	Diode	UDZS5R6(B)
D 2304	(B,90,42)	Diode	UDZS5R6(B)
D 2305	(B,62,38)	Diode	UDZS4R7(B)
D 2306	(B,91,26)	Diode	UDZS4R7(B)
D 2401	(A,24,57)	Diode	HZU2R7(B1)
D 2402	(A,24,53)	Diode	HZU2R7(B1)
D 2705	(B,25,26)	Diode	UDZS4R7(B)
D 2706	(A,9,27)	Diode	UDZS4R7(B)
L 2001	(B,26,29)	Inductor	CTF1473
L 2002	(A,45,53)	Inductor	CTF1473
L 2101	(A,68,43)	Inductor	CTF1473
L 2102	(A,63,43)	Inductor	CTF1473
L 2401	(B,21,43)	Inductor	CTF1473
L 2501	(B,55,53)	Inductor	CTF1473
L 2601	(A,55,39)	Inductor	CTF1473
VR2001	(A,41,58)	Semi-fixed 1.5 kΩ(B)	CCP1391
⚠FU2401	(A,15,59)	Fuse 3 A	CEK1286

RESISTORS

Circuit Symbol and No.		Part No.
R 2001	(A,29,47)	RS1/16S0R0J
R 2002	(A,30,47)	RS1/16S0R0J
R 2003	(B,42,52)	RS1/16S222J
R 2004	(B,42,50)	RS1/16S222J
R 2005	(A,37,53)	RS1/16S681J
R 2006	(A,38,55)	RS1/16S331J
R 2007	(B,40,56)	RS1/16S681J
R 2008	(A,36,55)	RS1/16S272J
R 2009	(B,40,58)	RS1/16S0R0J
R 2010	(A,34,55)	RS1/16S0R0J
R 2011	(A,32,55)	RS1/16S0R0J
R 2101	(B,75,57)	RS1/16S750J
R 2102	(B,64,57)	RS1/16S750J
R 2105	(A,52,23)	RS1/16S0R0J
R 2106	(A,52,29)	RS1/16S0R0J
R 2191	(B,74,50)	RS1/16S102J
R 2192	(B,62,59)	RS1/16S102J
R 2201	(B,45,13)	RS1/16S123J
R 2202	(A,72,10)	RS1/16S123J
R 2203	(A,45,15)	RS1/16S123J
R 2204	(A,72,15)	RS1/16S123J
R 2205	(A,43,15)	RS1/16S223J
R 2206	(A,70,13)	RS1/16S223J
R 2207	(B,44,7)	RS1/16S223J
R 2208	(A,71,6)	RS1/16S223J
R 2209	(B,39,8)	RS1/16S473J
R 2210	(B,66,8)	RS1/16S473J
R 2211	(B,39,10)	RS1/16S473J
R 2212	(B,66,10)	RS1/16S473J
R 2213	(B,38,6)	RS1/16S1002D
R 2214	(B,66,6)	RS1/16S1002D
R 2215	(B,34,10)	RS1/16S1002D
R 2216	(B,59,9)	RS1/16S1002D
R 2217	(B,27,8)	RS1/16S1002D
R 2218	(B,55,8)	RS1/16S1002D
R 2219	(B,25,12)	RS1/16S1002D
R 2220	(B,53,11)	RS1/16S1002D
R 2221	(A,20,9)	RS1/16S471J
R 2222	(A,48,9)	RS1/16S471J
R 2223	(B,17,11)	RS1/16S472J
R 2224	(B,48,6)	RS1/16S472J
R 2225	(A,52,25)	RS1/16S562J
R 2226	(A,52,26)	RS1/16S562J
R 2301	(B,84,45)	RS1/16S102J
R 2302	(A,95,49)	RS1/16S102J
R 2303	(B,80,48)	RS1/16S181J
R 2304	(A,92,49)	RS1/16S181J
R 2307	(B,80,47)	RS1/16S223J
R 2308	(A,94,49)	RS1/16S223J
R 2309	(B,80,33)	RS1/16S473J
R 2310	(B,96,41)	RS1/16S473J
R 2311	(B,80,35)	RS1/16S473J
R 2312	(B,94,41)	RS1/16S473J
R 2313	(B,80,31)	RS1/16S1002D
R 2314	(B,98,40)	RS1/16S1002D
R 2315	(B,73,35)	RS1/16S1002D
R 2316	(B,95,35)	RS1/16S1002D
R 2317	(B,69,32)	RS1/16S1002D
R 2318	(B,98,30)	RS1/16S1002D
R 2319	(B,68,37)	RS1/16S1002D

Circuit Symbol and No.			Part No.
R	2320	(B,93,30)	RS1/16S1002D
R	2321	(A,61,35)	RS1/16S471J
R	2322	(B,96,26)	RS1/16S471J
R	2323	(B,63,30)	RS1/16S472J
R	2324	(B,97,21)	RS1/16S472J
R	2325	(A,39,38)	RS1/16S562J
R	2326	(A,36,38)	RS1/16S562J
R	2401	(B,18,55)	RS1/16S750J
R	2403	(A,38,38)	RS1/16S0R0J
R	2503	(A,48,18)	RS1/16S0R0J
R	2603	(A,45,38)	RS1/16S0R0J
R	2701	(A,8,55)	RS1/16S181J
R	2702	(A,11,54)	RS1/16S181J
R	2703	(A,9,55)	RS1/16S102J
R	2704	(A,11,50)	RS1/16S102J
R	2705	(B,9,55)	RS1/16S223J
R	2706	(B,12,49)	RS1/16S223J
R	2707	(B,9,21)	RS1/16S473J
R	2708	(B,14,43)	RS1/16S473J
R	2709	(B,9,19)	RS1/16S473J
R	2710	(B,13,43)	RS1/16S473J
R	2711	(B,11,23)	RS1/16S1002D
R	2712	(B,17,42)	RS1/16S1002D
R	2713	(A,16,20)	RS1/16S1002D
R	2714	(A,14,36)	RS1/16S1002D
R	2715	(B,19,23)	RS1/16S1002D
R	2716	(B,17,34)	RS1/16S1002D
R	2717	(B,19,18)	RS1/16S1002D
R	2718	(B,12,34)	RS1/16S1002D
R	2719	(B,23,20)	RS1/16S471J
R	2720	(B,13,29)	RS1/16S471J
R	2721	(B,25,24)	RS1/16S472J
R	2722	(A,17,26)	RS1/16S472J
R	2723	(A,43,38)	RS1/16S562J
R	2724	(A,41,38)	RS1/16S562J

CAPACITORS

Circuit Symbol and No.			Part No.
C	2001	(A,29,20)	CEJQ100M16
C	2002	(B,34,25)	CKSRYB104K50
C	2003	(A,29,27)	CEJQ100M16
C	2004	(A,29,40)	CEJQ220M10
C	2005	(A,29,33)	CEJQ470M10
C	2006	(A,23,38)	CEJQ220M10
C	2007	(A,23,31)	CEJQ470M10
C	2008	(A,39,48)	CEJQ101M10
C	2009	(A,44,53)	CKSRYB105K10
C	2101	(A,79,54)	CEJQ100M16
C	2102	(A,66,54)	CEJQ100M16
C	2103	(A,72,54)	CEJQ100M16
C	2104	(A,60,54)	CEJQ100M16
C	2105	(B,67,48)	CKSRYB104K50
C	2106	(B,61,48)	CKSRYB104K50
C	2107	(B,57,23)	CKSRYB105K10
C	2108	(B,56,30)	CKSRYB105K10
C	2191	(B,73,50)	CCSRCH471J50
C	2192	(B,62,61)	CCSRCH471J50
C	2201	(A,83,68)	CCSRCH471J50
C	2202	(A,83,67)	CCSRCH471J50
C	2203	(B,44,9)	CKSRYB105K10
C	2204	(A,71,8)	CKSRYB105K10
C	2205	(B,43,12)	CKSRYB105K10
C	2206	(A,70,10)	CKSRYB105K10
C	2207	(B,27,6)	CCSRCH820J50
C	2208	(B,53,8)	CCSRCH820J50
C	2209	(B,26,10)	CCSRCH820J50
C	2210	(B,52,11)	CCSRCH820J50
C	2211	(B,23,13)	CKSRYB104K50
C	2212	(B,50,13)	CKSRYB104K50
C	2213	(A,30,13)	CEJQ100M16
C	2214	(A,56,13)	CEJQ100M16
C	2215	(B,24,8)	CKSRYB104K50
C	2216	(B,50,8)	CKSRYB104K50
C	2217	(A,36,13)	CEJQ220M16
C	2218	(A,63,13)	CEJQ220M16
C	2219	(A,55,25)	CKSRYB105K10
C	2220	(A,55,26)	CKSRYB105K10
C	2301	(A,86,51)	CCSRCH471J50
C	2302	(A,97,49)	CCSRCH471J50
C	2303	(B,82,43)	CKSRYB105K10
C	2304	(A,95,47)	CKSRYB105K10
C	2305	(B,80,43)	CKSRYB105K10
C	2306	(A,94,46)	CKSRYB105K10
C	2307	(B,68,32)	CCSRCH820J50
C	2308	(B,98,28)	CCSRCH820J50
C	2309	(B,66,37)	CCSRCH820J50
C	2310	(B,93,28)	CCSRCH820J50
C	2311	(B,64,39)	CKSRYB104K50
C	2312	(B,93,23)	CKSRYB104K50
C	2313	(A,71,40)	CEJQ100M16
C	2314	(A,90,31)	CEJQ100M16
C	2315	(A,66,31)	CKSRYB104K50
C	2316	(A,99,26)	CKSRYB104K50
C	2317	(A,78,40)	CEJQ220M16
C	2318	(A,90,37)	CEJQ220M16
C	2319	(A,39,41)	CKSRYB105K10
C	2320	(A,36,41)	CKSRYB105K10
C	2402	(A,20,51)	CEJQ100M16
C	2403	(A,15,51)	CEJQ100M16
C	2404	(B,21,44)	CKSRYB104K50
C	2405	(B,38,42)	CKSRYB105K10
C	2501	(B,52,53)	CKSRYB104K50
C	2502	(B,49,24)	CKSRYB105K10
C	2503	(A,50,58)	CEJQ100M16
C	2504	(A,55,58)	CEJQ100M16
C	2601	(A,48,44)	CEJQ100M16
C	2602	(A,55,44)	CEJQ100M16
C	2603	(B,52,40)	CKSRYB104K50
C	2604	(A,46,40)	CKSRYB105K10
C	2701	(B,7,55)	CCSRCH471J50
C	2702	(B,10,55)	CCSRCH471J50
C	2703	(A,6,23)	CKSRYB105K10
C	2704	(A,11,47)	CKSRYB105K10
C	2705	(A,6,18)	CKSRYB105K10
C	2706	(A,10,50)	CKSRYB105K10
C	2707	(B,20,23)	CCSRCH820J50
C	2708	(B,17,32)	CCSRCH820J50
C	2709	(B,20,18)	CCSRCH820J50
C	2710	(B,12,32)	CCSRCH820J50
C	2711	(B,25,17)	CKSRYB104K50
C	2712	(A,9,29)	CKSRYB104K50

Circuit Symbol and No.			Part No.
C 2713	(A,16,15)		CEJQ100M16
C 2714	(A,9,34)		CEJQ100M16
C 2715	(A,22,23)		CKSRYB104K50
C 2716	(A,17,30)		CKSRYB104K50
C 2717	(A,9,15)		CEJQ220M16
C 2718	(A,9,40)		CEJQ220M16
C 2719	(B,44,37)		CKSRYB105K10
C 2720	(B,42,37)		CKSRYB105K10

C

Unit Number : CWN1681(RE, RD, RC, RI)
Unit Name : AV Selector Unit

MISCELLANEOUS

Circuit Symbol and No.			Part No.
IC 2001	(A,41,27)	IC	CXA2089Q
IC 2101	(A,67,49)	IC	NJM2505F
IC 2102	(A,61,49)	IC	NJM2505F
IC 2201	(A,37,8)	IC	NJM4558V
IC 2202	(A,64,8)	IC	NJM4558V
IC 2203	(A,25,8)	IC	NJM2068V
IC 2204	(A,53,8)	IC	NJM2068V
IC 2251	(A,92,8)	IC	NJM4558V
IC 2252	(A,78,22)	IC	NJM4558V
IC 2253	(A,80,8)	IC	NJM2068V
IC 2254	(A,67,22)	IC	NJM2068V
IC 2301	(A,78,34)	IC	NJM4558V
IC 2302	(A,96,38)	IC	NJM4558V
IC 2303	(A,67,34)	IC	NJM2068V
IC 2304	(A,96,27)	IC	NJM2068V
IC 2401	(A,19,44)	IC	NJM2505F
IC 2501	(A,52,52)	IC	NJM2505F
IC 2601	(A,51,39)	IC	NJM2505F
IC 2701	(A,11,20)	IC	NJM4558V
IC 2702	(A,14,41)	IC	NJM4558V
IC 2703	(A,22,20)	IC	NJM2068V
IC 2704	(A,14,31)	IC	NJM2068V
Q 2001	(A,41,54)	Transistor	2SC4081
Q 2002	(B,38,52)	Transistor	2SA1577
D 2191	(B,76,64)	Diode	HZU2R7(B1)
D 2192	(B,79,60)	Diode	HZU2R7(B1)
D 2193	(B,70,62)	Diode	HZU2R7(B1)
D 2194	(B,70,59)	Diode	HZU2R7(B1)
D 2201	(B,84,69)	Diode	UDZS5R6(B)
D 2202	(B,84,67)	Diode	UDZS5R6(B)
D 2203	(B,90,69)	Diode	UDZS5R6(B)
D 2204	(B,90,67)	Diode	UDZS5R6(B)
D 2205	(B,20,12)	Diode	UDZS4R7(B)
D 2206	(B,47,11)	Diode	UDZS4R7(B)
D 2251	(B,84,64)	Diode	UDZS5R6(B)
D 2252	(B,83,61)	Diode	UDZS5R6(B)
D 2253	(B,90,64)	Diode	UDZS5R6(B)
D 2254	(B,89,61)	Diode	UDZS5R6(B)
D 2255	(A,78,12)	Diode	UDZS4R7(B)
D 2256	(B,62,26)	Diode	UDZS4R7(B)
D 2301	(A,89,49)	Diode	UDZS5R6(B)
D 2302	(B,90,48)	Diode	UDZS5R6(B)
D 2303	(A,87,46)	Diode	UDZS5R6(B)
D 2304	(B,90,42)	Diode	UDZS5R6(B)
D 2305	(B,62,38)	Diode	UDZS4R7(B)
D 2306	(B,91,26)	Diode	UDZS4R7(B)
D 2401	(A,24,57)	Diode	HZU2R7(B1)
D 2402	(A,24,53)	Diode	HZU2R7(B1)
D 2705	(B,25,26)	Diode	UDZS4R7(B)
D 2706	(A,9,27)	Diode	UDZS4R7(B)
L 2001	(B,26,29)	Inductor	CTF1473
L 2002	(A,45,53)	Inductor	CTF1473
L 2101	(A,68,43)	Inductor	CTF1473
L 2102	(A,63,43)	Inductor	CTF1473
L 2401	(B,21,43)	Inductor	CTF1473
L 2501	(B,55,53)	Inductor	CTF1473
L 2601	(A,55,39)	Inductor	CTF1473
VR2001	(A,41,58)	Semi-fixed 1.5 kΩ(B)	CCP1391
⚠FU2401	(A,15,59)	Fuse 3 A	CEK1286

RESISTORS

Circuit Symbol and No.		Part No.
R 2001	(A,29,47)	RS1/16S0R0J
R 2002	(A,30,47)	RS1/16S0R0J
R 2003	(B,42,52)	RS1/16S222J
R 2004	(B,42,50)	RS1/16S222J
R 2005	(A,37,53)	RS1/16S681J
R 2006	(A,38,55)	RS1/16S331J
R 2007	(B,40,56)	RS1/16S681J
R 2008	(A,36,55)	RS1/16S272J
R 2009	(B,40,58)	RS1/16S0R0J
R 2010	(A,34,55)	RS1/16S0R0J
R 2011	(A,32,55)	RS1/16S0R0J
R 2101	(B,75,57)	RS1/16S750J
R 2102	(B,64,57)	RS1/16S750J
R 2105	(A,52,23)	RS1/16S0R0J
R 2106	(A,52,29)	RS1/16S0R0J
R 2191	(B,74,50)	RS1/16S102J
R 2192	(B,62,59)	RS1/16S102J
R 2201	(B,45,13)	RS1/16S123J
R 2202	(A,72,10)	RS1/16S123J
R 2203	(A,45,15)	RS1/16S123J
R 2204	(A,72,15)	RS1/16S123J
R 2205	(A,43,15)	RS1/16S223J
R 2206	(A,70,13)	RS1/16S223J
R 2207	(B,44,7)	RS1/16S223J
R 2208	(A,71,6)	RS1/16S223J
R 2209	(B,39,8)	RS1/16S473J
R 2210	(B,66,8)	RS1/16S473J
R 2211	(B,39,10)	RS1/16S473J
R 2212	(B,66,10)	RS1/16S473J
R 2213	(B,38,6)	RS1/16S1002D
R 2214	(B,66,6)	RS1/16S1002D
R 2215	(B,34,10)	RS1/16S1002D
R 2216	(B,59,9)	RS1/16S1002D
R 2217	(B,27,8)	RS1/16S1002D
R 2218	(B,55,8)	RS1/16S1002D
R 2219	(B,25,12)	RS1/16S1002D
R 2220	(B,53,11)	RS1/16S1002D
R 2221	(A,20,9)	RS1/16S471J
R 2222	(A,48,9)	RS1/16S471J
R 2223	(B,17,11)	RS1/16S472J
R 2224	(B,48,6)	RS1/16S472J
R 2225	(A,52,25)	RS1/16S562J
R 2226	(A,52,26)	RS1/16S562J

Circuit Symbol and No.		Part No.
R 2251	(B,102,16)	RS1/16S123J
R 2252	(A,89,23)	RS1/16S123J
R 2253	(B,100,18)	RS1/16S123J
R 2254	(A,89,25)	RS1/16S123J
R 2255	(B,96,16)	RS1/16S223J
R 2256	(A,88,26)	RS1/16S223J
R 2257	(B,103,13)	RS1/16S223J
R 2258	(A,89,22)	RS1/16S223J
R 2259	(B,94,10)	RS1/16S473J
R 2260	(B,80,22)	RS1/16S473J
R 2261	(B,97,13)	RS1/16S473J
R 2262	(B,80,24)	RS1/16S473J
R 2263	(B,94,8)	RS1/16S1002D
R 2264	(B,77,20)	RS1/16S1002D
R 2265	(B,87,10)	RS1/16S1002D
R 2266	(B,74,23)	RS1/16S1002D
R 2267	(B,83,8)	RS1/16S1002D
R 2268	(B,70,21)	RS1/16S1002D
R 2269	(B,81,11)	RS1/16S1002D
R 2270	(B,68,25)	RS1/16S1002D
R 2271	(A,75,9)	RS1/16S471J
R 2272	(A,62,23)	RS1/16S471J
R 2273	(B,74,8)	RS1/16S472J
R 2274	(B,62,19)	RS1/16S472J
R 2275	(A,52,30)	RS1/16S562J
R 2276	(A,52,32)	RS1/16S562J
R 2301	(B,84,45)	RS1/16S102J
R 2302	(A,95,49)	RS1/16S102J
R 2303	(B,80,48)	RS1/16S181J
R 2304	(A,92,49)	RS1/16S181J
R 2307	(B,80,47)	RS1/16S223J
R 2308	(A,94,49)	RS1/16S223J
R 2309	(B,80,33)	RS1/16S473J
R 2310	(B,96,41)	RS1/16S473J
R 2311	(B,80,35)	RS1/16S473J
R 2312	(B,94,41)	RS1/16S473J
R 2313	(B,80,31)	RS1/16S1002D
R 2314	(B,98,40)	RS1/16S1002D
R 2315	(B,73,35)	RS1/16S1002D
R 2316	(B,95,35)	RS1/16S1002D
R 2317	(B,69,32)	RS1/16S1002D
R 2318	(B,98,30)	RS1/16S1002D
R 2319	(B,68,37)	RS1/16S1002D
R 2320	(B,93,30)	RS1/16S1002D
R 2321	(A,61,35)	RS1/16S471J
R 2322	(B,96,26)	RS1/16S471J
R 2323	(B,63,30)	RS1/16S472J
R 2324	(B,97,21)	RS1/16S472J
R 2325	(A,39,38)	RS1/16S562J
R 2326	(A,36,38)	RS1/16S562J
R 2401	(B,18,55)	RS1/16S750J
R 2403	(A,38,38)	RS1/16S0R0J
R 2503	(A,48,18)	RS1/16S0R0J
R 2603	(A,45,38)	RS1/16S0R0J
R 2701	(A,8,55)	RS1/16S181J
R 2702	(A,11,54)	RS1/16S181J
R 2703	(A,9,55)	RS1/16S102J
R 2704	(A,11,50)	RS1/16S102J
R 2705	(B,9,55)	RS1/16S223J
R 2706	(B,12,49)	RS1/16S223J
R 2707	(B,9,21)	RS1/16S473J
R 2708	(B,14,43)	RS1/16S473J
R 2709	(B,9,19)	RS1/16S473J
R 2710	(B,13,43)	RS1/16S473J
R 2711	(B,11,23)	RS1/16S1002D
R 2712	(B,17,42)	RS1/16S1002D
R 2713	(A,16,20)	RS1/16S1002D
R 2714	(A,14,36)	RS1/16S1002D
R 2715	(B,19,23)	RS1/16S1002D
R 2716	(B,17,34)	RS1/16S1002D
R 2717	(B,19,18)	RS1/16S1002D
R 2718	(B,12,34)	RS1/16S1002D
R 2719	(B,23,20)	RS1/16S471J
R 2720	(B,13,29)	RS1/16S471J
R 2721	(B,25,24)	RS1/16S472J
R 2722	(A,17,26)	RS1/16S472J
R 2723	(A,43,38)	RS1/16S562J
R 2724	(A,41,38)	RS1/16S562J

CAPACITORS

C 2001	(A,29,20)	CEJQ100M16
C 2002	(B,34,25)	CKSRYB104K50
C 2003	(A,29,27)	CEJQ100M16
C 2004	(A,29,40)	CEJQ220M10
C 2005	(A,29,33)	CEJQ470M10
C 2006	(A,23,38)	CEJQ220M10
C 2007	(A,23,31)	CEJQ470M10
C 2008	(A,39,48)	CEJQ101M10
C 2009	(A,44,53)	CKSRYB105K10
C 2101	(A,79,54)	CEJQ100M16
C 2102	(A,66,54)	CEJQ100M16
C 2103	(A,72,54)	CEJQ100M16
C 2104	(A,60,54)	CEJQ100M16
C 2105	(B,67,48)	CKSRYB104K50
C 2106	(B,61,48)	CKSRYB104K50
C 2107	(B,57,23)	CKSRYB105K10
C 2108	(B,56,30)	CKSRYB105K10
C 2191	(B,73,50)	CCSRCH471J50
C 2192	(B,62,61)	CCSRCH471J50
C 2201	(A,83,68)	CCSRCH471J50
C 2202	(A,83,67)	CCSRCH471J50
C 2203	(B,44,9)	CKSRYB105K10
C 2204	(A,71,8)	CKSRYB105K10
C 2205	(B,43,12)	CKSRYB105K10
C 2206	(A,70,10)	CKSRYB105K10
C 2207	(B,27,6)	CCSRCH820J50
C 2208	(B,53,8)	CCSRCH820J50
C 2209	(B,26,10)	CCSRCH820J50
C 2210	(B,52,11)	CCSRCH820J50
C 2211	(B,23,13)	CKSRYB104K50
C 2212	(B,50,13)	CKSRYB104K50
C 2213	(A,30,13)	CEJQ100M16
C 2214	(A,56,13)	CEJQ100M16
C 2215	(B,24,8)	CKSRYB104K50
C 2216	(B,50,8)	CKSRYB104K50
C 2217	(A,36,13)	CEJQ220M16
C 2218	(A,63,13)	CEJQ220M16
C 2219	(A,55,25)	CKSRYB105K10
C 2220	(A,55,26)	CKSRYB105K10

Circuit Symbol and No.		Part No.
C 2251	(A,83,62)	CCSRCH471J50
C 2252	(A,85,59)	CCSRCH471J50
C 2253	(B,101,13)	CKSRYB105K10
C 2254	(A,86,23)	CKSRYB105K10
C 2255	(B,99,13)	CKSRYB105K10
C 2256	(A,86,25)	CKSRYB105K10
C 2257	(B,81,7)	CCSRCH820J50
C 2258	(B,68,21)	CCSRCH820J50
C 2259	(B,78,9)	CCSRCH820J50
C 2260	(B,66,24)	CCSRCH820J50
C 2261	(A,78,14)	CKSRYB104K50
C 2262	(B,64,27)	CKSRYB104K50
C 2263	(A,84,13)	CEJQ100M16
C 2264	(A,71,27)	CEJQ100M16
C 2265	(B,79,6)	CKSRYB104K50
C 2266	(A,67,19)	CKSRYB104K50
C 2267	(A,91,13)	CEJQ220M16
C 2268	(A,78,27)	CEJQ220M16
C 2269	(A,55,30)	CKSRYB105K10
C 2270	(A,55,32)	CKSRYB105K10
C 2301	(A,86,51)	CCSRCH471J50
C 2302	(A,97,49)	CCSRCH471J50
C 2303	(B,82,43)	CKSRYB105K10
C 2304	(A,95,47)	CKSRYB105K10
C 2305	(B,80,43)	CKSRYB105K10
C 2306	(A,94,46)	CKSRYB105K10
C 2307	(B,68,32)	CCSRCH820J50
C 2308	(B,98,28)	CCSRCH820J50
C 2309	(B,66,37)	CCSRCH820J50
C 2310	(B,93,28)	CCSRCH820J50
C 2311	(B,64,39)	CKSRYB104K50
C 2312	(B,93,23)	CKSRYB104K50
C 2313	(A,71,40)	CEJQ100M16
C 2314	(A,90,31)	CEJQ100M16
C 2315	(A,66,31)	CKSRYB104K50
C 2316	(A,99,26)	CKSRYB104K50
C 2317	(A,78,40)	CEJQ220M16
C 2318	(A,90,37)	CEJQ220M16
C 2319	(A,39,41)	CKSRYB105K10
C 2320	(A,36,41)	CKSRYB105K10
C 2402	(A,20,51)	CEJQ100M16
C 2403	(A,15,51)	CEJQ100M16
C 2404	(B,21,44)	CKSRYB104K50
C 2405	(B,38,42)	CKSRYB105K10
C 2501	(B,52,53)	CKSRYB104K50
C 2502	(B,49,24)	CKSRYB105K10
C 2503	(A,50,58)	CEJQ100M16
C 2504	(A,55,58)	CEJQ100M16
C 2601	(A,48,44)	CEJQ100M16
C 2602	(A,55,44)	CEJQ100M16
C 2603	(B,52,40)	CKSRYB104K50
C 2604	(A,46,40)	CKSRYB105K10
C 2701	(B,7,55)	CCSRCH471J50
C 2702	(B,10,55)	CCSRCH471J50
C 2703	(A,6,23)	CKSRYB105K10
C 2704	(A,11,47)	CKSRYB105K10
C 2705	(A,6,18)	CKSRYB105K10
C 2706	(A,10,50)	CKSRYB105K10
C 2707	(B,20,23)	CCSRCH820J50
C 2708	(B,17,32)	CCSRCH820J50

Circuit Symbol and No.		Part No.
C 2709	(B,20,18)	CCSRCH820J50
C 2710	(B,12,32)	CCSRCH820J50
C 2711	(B,25,17)	CKSRYB104K50
C 2712	(A,9,29)	CKSRYB104K50
C 2713	(A,16,15)	CEJQ100M16
C 2714	(A,9,34)	CEJQ100M16
C 2715	(A,22,23)	CKSRYB104K50
C 2716	(A,17,30)	CKSRYB104K50
C 2717	(A,9,15)	CEJQ220M16
C 2718	(A,9,40)	CEJQ220M16
C 2719	(B,44,37)	CKSRYB105K10
C 2720	(B,42,37)	CKSRYB105K10

Monitor Unit
Consists of
Monitor PCB
Panel PCB

F G

Unit Number : CWN1683
Unit Name : Monitor Unit

MISCELLANEOUS

IC 4001	(B,66,61) IC	S-1131B15UC-N4A
IC 4002	(A,69,56) IC	S-1131B25UC-N4K
IC 4003	(B,62,32) IC	BD6171KV
IC 4101	(B,121,80) IC	TA78L05F
IC 4102	(B,134,71) IC	TC7SET08FUS1
IC 4103	(A,131,72) IC	TC7SET08FUS1
IC 4104	(B,140,76) IC	OZ961ISN
IC 4105	(A,140,69) FET	SI6544DQ
IC 4106	(A,144,67) FET	SI6544DQ
IC 4301	(A,5,56) IC	TC7SH02FUS1
IC 4302	(A,9,59) IC	TC7WH08FU
IC 4303	(A,4,53) IC	TC7SH32FUS1
IC 4351	(A,78,76) IC	NJM2505F
IC 4401	(A,65,68) IC	NJM2138V
IC 4701	(A,34,61) IC	TC90A96AFG-P
IC 4801	(A,10,51) IC	M62343FP
IC 4802	(A,17,45) IC	TC7SET04FUS1
IC 4803	(B,12,52) IC	NJM2100V
IC 4804	(B,15,44) IC	TC7S66FU
IC 4805	(A,8,36) IC	NJM082BV
IC 4901	(A,50,46) IC	TC7SET04FUS1
IC 4902	(B,51,41) IC	TC74VHC04FTS1
IC 5001	(B,129,57) IC	TC7SH08FUS1
IC 5002	(A,105,44) IC	PE5536A
IC 5003	(A,126,58) IC	TC7SH08FUS1
IC 5004	(A,105,62) IC	S-80830CNNB-B8P
IC 5006	(A,129,64) IC	S-93C66BD0I-J8
IC 5151	(A,131,51) IC	BA3834F
IC 5301	(A,96,13) IC	PD8165A
IC 5501	(B,103,44) IC	HD64413ASFI
IC 5502	(B,116,22) IC	TC7WHU04FU
IC 5503	(B,82,53) IC	TC7SZ04FU
IC 5701	(A,90,60) IC	TC7MB3257FK
IC 5801	(B,95,14) IC	K4S641632K-UC75
Q 4001	(A,68,31) FET	RSQ035P03

Circuit Symbol and No.	Part No.
Q 4002 (A,68,34) FET	RSQ035P03
Q 4003 (A,64,49) Transistor	DTC114EU
Q 4101 (A,133,76) Transistor	2SC4617
Q 4102 (A,136,77) Transistor	2SC4617
Q 4103 (A,141,83) Transistor	2SA1774
Q 4151 (B,140,63) Transistor	2SC4617
Q 4152 (B,140,61) Transistor	2SC4617
Q 4153 (B,137,61) Transistor	UMX2N
Q 4371 (A,72,83) Transistor	2SC4081
Q 4372 (A,66,80) Transistor	2SA1576
Q 4401 (B,64,79) Transistor	2SC4081
Q 4601 (B,28,83) Transistor	2SC4617
Q 4602 (B,24,80) Transistor	2SC4617
Q 4603 (A,23,84) Transistor	2SC4617
Q 4701 (B,22,78) Transistor	2SC4617
Q 4702 (B,39,76) Transistor	2SC4617
Q 4801 (B,14,34) Transistor	UMX2N
Q 4802 (B,10,34) Transistor	UMT2N
Q 5001 (A,81,44) Transistor	DTC124EUA
Q 5251 (A,101,82) Transistor	2SA1797
Q 5252 (A,97,85) Transistor	DTC124EUA
Q 5271 (B,107,82) Transistor	DTC124EUA
Q 5272 (B,101,82) Transistor	2SA1037K
Q 5401 (B,119,10) Transistor	UMF5N
Q 5402 (B,116,10) Transistor	UMF5N
Q 5403 (B,123,15) Transistor	FMG12
D 4001 (B,74,60) Diode	RB500V-40
D 4002 (B,74,56) Diode	RB500V-40
D 4003 (A,68,28) Diode	U2FWJ44N
D 4004 (A,69,37) Diode	RB160M-30
D 4005 (B,64,41) Diode	RB548W
D 4006 (B,66,41) Diode	RB548W
D 4007 (A,58,41) Diode	RB548W
D 4008 (B,58,41) Diode	RB548W
D 4009 (B,60,41) Diode	RB548W
D 4101 (A,127,75) Diode	UDZS6R2(B)
D 4102 (A,136,82) Diode	1SS355
D 4103 (A,137,74) Diode	RB751V-40
D 4104 (A,135,63) Diode	HZU6R2(B3)
D 4105 (B,143,67) Diode	HZU6R2(B3)
D 4106 (A,134,29) Diode	MA143
D 4107 (A,134,37) Diode	MA143
D 4108 (A,133,34) Diode	HZU6R2(B3)
D 4151 (B,143,64) Diode	UDZS8R2(B)
D 4201 (A,127,16) Diode	UDZS5R6(B)
D 4202 (A,127,20) Diode	UDZS5R6(B)
D 4203 (A,128,23) Diode	UDZS5R6(B)
D 4204 (A,128,27) Diode	UDZS5R6(B)
D 4221 (B,66,14) Diode	UDZS5R6(B)
D 4222 (B,69,12) Diode	UDZS5R6(B)
D 4223 (B,68,7) Diode	UDZS5R6(B)
D 4224 (B,69,15) Diode	UDZS5R6(B)
D 4951 (Panel PCB) Chip LED	CL220UBXTS
D 4952 (Panel PCB) Chip LED	CL220UBXTS
D 5001 (A,104,64) Diode	MA111
D 5401 (B,124,11) Diode	MA111
L 4001 (A,69,18) Choke Coil 18 μH	CTH1250
L 4002 (A,62,17) Choke Coil 10 μH	CTH1249
L 4003 (A,61,25) Choke Coil 18 μH	CTH1250
L 4004 (A,52,14) Inductor	CTF1488

Circuit Symbol and No.	Part No.
L 4005 (A,73,41) Choke Coil 68 μH	CTH1318
L 4007 (A,70,47) Inductor	DTL1096
L 4008 (B,54,57) Inductor	CTF1635
L 4009 (A,60,59) Inductor	CTF1635
L 4010 (B,57,57) Inductor	CTF1635
L 4011 (A,58,10) Inductor	CTF1635
L 4012 (B,65,54) Inductor	CTF1635
L 4013 (A,67,52) Inductor	CTF1635
L 4014 (A,53,24) Inductor	CTF1635
L 4015 (A,60,48) Inductor	CTF1635
L 4016 (A,65,46) Inductor	CTF1635
L 4101 (A,122,84) Coil	CTH1338
L 4102 (B,136,69) Inductor	CTF1306
L 4201 (A,96,65) Inductor	CTF1473
L 4301 (A,8,63) Inductor	LCKAW101J2520
L 4351 (A,76,76) Inductor	CTF1379
L 4371 (A,73,78) Inductor	LCKAW270J2520
L 4372 (A,73,75) Inductor	LCKAW390J2520
L 4373 (A,70,86) Inductor	LCKAW101J2520
L 4401 (B,67,76) Chip Ferrite Bead	CTF1399
L 4701 (A,46,79) Inductor	CTF1306
L 4702 (A,38,79) Inductor	CTF1306
L 4703 (A,36,78) Inductor	CTF1306
L 4704 (A,32,78) Inductor	CTF1306
L 4705 (A,35,80) Inductor	CTF1306
L 4706 (A,23,77) Inductor	CTF1306
L 4707 (A,29,78) Inductor	CTF1306
L 4708 (A,26,78) Inductor	CTF1306
L 4709 (A,51,72) Inductor	CTF1306
L 4710 (A,48,75) Inductor	CTF1306
L 4711 (A,48,77) Inductor	CTF1306
L 4712 (A,47,79) Inductor	CTF1306
L 4713 (A,18,74) Inductor	CTF1306
L 4714 (A,17,72) Inductor	CTF1306
L 4715 (A,17,71) Inductor	CTF1306
L 4716 (A,17,69) Inductor	CTF1306
L 4717 (A,17,68) Inductor	CTF1306
L 4718 (A,51,69) Inductor	CTF1306
L 4719 (A,51,66) Inductor	CTF1306
L 4720 (A,51,63) Inductor	CTF1306
L 4721 (A,17,66) Inductor	CTF1306
L 4722 (A,14,68) Inductor	CTF1306
L 4723 (A,17,64) Inductor	CTF1306
L 4724 (A,14,66) Inductor	CTF1306
L 4725 (A,17,63) Inductor	CTF1306
L 4726 (A,14,65) Inductor	CTF1306
L 4727 (A,51,60) Inductor	CTF1306
L 4728 (A,51,57) Inductor	CTF1306
L 4729 (A,17,61) Inductor	CTF1306
L 4730 (A,16,58) Inductor	CTF1306
L 4731 (A,16,57) Inductor	CTF1306
L 4732 (A,51,54) Inductor	CTF1306
L 4733 (A,50,52) Inductor	CTF1306
L 4734 (A,17,56) Inductor	CTF1306
L 4735 (A,17,52) Inductor	CTF1306
L 4736 (A,17,50) Inductor	CTF1306
L 4737 (A,17,49) Inductor	CTF1306
L 4738 (A,17,47) Inductor	CTF1306
L 4739 (A,44,46) Ferrite Bead	CTF1528
L 4740 (A,44,43) Ferrite Bead	CTF1528

Circuit Symbol and No.				Part No.
L	4741	(A,46,44)	Inductor	CTF1306
L	4742	(A,48,44)	Inductor	CTF1306
L	4743	(A,43,43)	Ferrite Bead	CTF1528
L	4744	(A,42,41)	Ferrite Bead	CTF1528
L	4745	(A,42,43)	Ferrite Bead	CTF1528
L	4746	(A,41,45)	Ferrite Bead	CTF1528
L	4747	(A,40,44)	Inductor	CTF1306
L	4748	(A,37,40)	Ferrite Bead	CTF1528
L	4749	(A,38,43)	Inductor	CTF1306
L	4750	(A,37,44)	Inductor	CTF1306
L	4751	(A,36,40)	Ferrite Bead	CTF1528
L	4752	(A,35,41)	Ferrite Bead	CTF1528
L	4753	(A,35,46)	Ferrite Bead	CTF1528
L	4754	(A,34,41)	Ferrite Bead	CTF1528
L	4755	(A,33,41)	Ferrite Bead	CTF1528
L	4756	(A,33,44)	Inductor	CTF1306
L	4757	(A,31,45)	Ferrite Bead	CTF1528
L	4758	(A,31,42)	Ferrite Bead	CTF1528
L	4759	(A,30,44)	Ferrite Bead	CTF1528
L	4760	(A,30,42)	Ferrite Bead	CTF1528
L	4761	(A,29,46)	Ferrite Bead	CTF1528
L	4762	(A,29,43)	Ferrite Bead	CTF1528
L	4763	(A,25,45)	Ferrite Bead	CTF1528
L	4764	(A,24,45)	Ferrite Bead	CTF1528
L	4765	(A,23,45)	Ferrite Bead	CTF1528
L	4766	(A,22,43)	Ferrite Bead	CTF1528
L	4767	(A,21,45)	Ferrite Bead	CTF1528
L	4768	(A,21,43)	Ferrite Bead	CTF1528
L	4769	(A,20,45)	Ferrite Bead	CTF1528
L	4770	(A,27,43)	Inductor	CTF1306
L	4771	(A,25,43)	Inductor	CTF1306
L	4772	(A,55,29)	Inductor	LCKAW101J2520
L	4801	(A,14,43)	Inductor	CTF1306
L	4802	(A,10,44)	Inductor	LCKAW101J2520
L	4803	(A,9,28)	Inductor	LCKAW101J2520
L	4901	(A,53,34)	Inductor	CTF1306
L	4902	(A,46,40)	Inductor	CTF1306
L	4903	(A,21,36)	Inductor	DTL1096
L	4904	(A,13,34)	Inductor	DTL1096
L	4905	(A,54,46)	Inductor	CTF1635
L	4906	(A,26,38)	Inductor	CTF1635
L	4907	(A,18,40)	Inductor	CTF1635
L	5001	(B,127,59)	Inductor	CTF1379
L	5002	(A,121,44)	Inductor	CTF1473
L	5003	(A,129,59)	Inductor	CTF1379
L	5004	(A,103,28)	Inductor	CTF1473
L	5005	(A,100,59)	Inductor	CTF1473
L	5006	(A,97,62)	Inductor	CTF1473
L	5007	(A,90,49)	Inductor	CTF1473
L	5008	(A,87,24)	Inductor	CTF1306
L	5009	(A,128,69)	Inductor	CTF1306
L	5010	(B,117,76)	Inductor	CTF1488
L	5011	(B,113,66)	Inductor	CTF1488
L	5151	(A,134,58)	Inductor	CTF1306
L	5301	(A,83,37)	Inductor	CTF1488
L	5401	(B,122,9)	Inductor	CTF1379
L	5501	(B,114,17)	Inductor	CTF1379
L	5502	(B,91,78)	Inductor	CTF1379
L	5503	(B,117,71)	Inductor	CTF1488
L	5504	(B,113,28)	Inductor	CTF1378

Circuit Symbol and No.				Part No.
L	5701	(A,83,51)	Inductor	CTF1379
L	5702	(A,94,61)	Inductor	CTF1473
L	5703	(A,80,56)	Inductor	CTF1379
L	5801	(A,81,37)	Inductor	CTF1488
T	4101	(A,142,42)	Transformer	CTT1119
TH5001		(A,87,49)	Thermistor	CCX1051
X	4701	(A,42,80)	Crystal Resonator 42 MHz	CSS1604
X	5001	(A,104,58)	Crystal Resonator 8.0 MHz	CSS1675
X	5501	(B,121,26)	Crystal Resonator 33.0 MHz	CSS1629
X	5701	(A,83,55)	Crystal Resonator 9.600 MHz	CWX3206
VR4101		(A,145,75)	Semi-fixed 15 kΩ(B)	CCP1424
⚠FU4001		(A,54,12)	Fuse 1.25 A	CEK1281
⚠FU4101		(A,122,79)	Fuse 2 A	CEK1284
EF4501		(A,35,84)	EMI Filter	CCG1082
EF4521		(A,32,84)	EMI Filter	CCG1082
EF4541		(A,27,84)	EMI Filter	CCG1082
TP5004		(A,105,83)	Checker Chip	CKF1031
TP5005		(A,126,40)	Checker Chip	CKF1031
TP5006		(A,126,29)	Checker Chip	CKF1031

RESISTORS

R	4001	(B,73,58)	RS1/16SS684J
R	4002	(B,73,56)	RS1/16SS474J
R	4003	(B,55,18)	RS1/16S0R0J
R	4004	(B,56,18)	RS1/16S6801F
R	4005	(A,64,21)	RS1/16S0R0J
R	4006	(B,64,20)	RS1/16S0R0J
R	4007	(B,58,18)	RS1/16S201J
R	4008	(B,67,20)	RS1/16S1001D
R	4009	(B,55,21)	RS1/16S1001D
R	4010	(B,56,21)	RS1/16S682J
R	4011	(B,57,27)	RS1/16S5100F
R	4012	(B,68,22)	RS1/16S1600D
R	4013	(B,67,22)	RS1/16S102J
R	4014	(B,68,25)	RS1/16S2700D
R	4015	(B,58,25)	RS1/16S2001F
R	4016	(B,60,22)	RS1/16S684J
R	4017	(B,53,18)	RS1/16S0R0J
R	4018	(B,64,24)	RS1/16S333J
R	4019	(B,61,20)	RS1/16S123J
R	4020	(B,72,28)	RS1/16S273J
R	4021	(A,64,30)	RS1/16S150J
R	4022	(A,65,33)	RS1/16S150J
R	4023	(B,70,34)	RS1/16S563J
R	4024	(A,64,36)	RS1/16S5102D
R	4025	(B,56,38)	RS1/16S0R0J
R	4026	(B,53,35)	RS1/16S1002F
R	4027	(A,65,36)	RS1/16S4300D
R	4028	(B,55,35)	RS1/16S1802F
R	4029	(A,55,35)	RS1/16S2202F
R	4030	(A,65,39)	RS1/16S1802D
R	4031	(A,56,37)	RS1/16S0R0J
R	4032	(B,68,40)	RS1/16S3303D
R	4033	(A,64,43)	RS1/16S0R0J
R	4034	(B,69,43)	RS1/16S0R0J
R	4036	(A,62,36)	RS1/16S2703D
R	4102	(B,133,68)	RS1/16S103J
R	4103	(A,130,75)	RS1/16S103J
R	4104	(A,130,77)	RS1/16S104J

Circuit Symbol and No.		Part No.
R 4105	(B,134,73)	RS1/16SS103J
R 4106	(A,136,79)	RS1/16S473J
R 4107	(A,138,81)	RS1/16S472J
R 4108	(A,138,78)	RS1/16S105J
R 4109	(A,141,81)	RS1/16S473J
R 4110	(A,144,81)	RS1/16S333J
R 4111	(A,143,78)	RS1/16S513J
R 4112	(B,129,70)	RS1/16S103J
R 4113	(B,133,76)	RS1/16S105J
R 4114	(A,134,73)	RS1/16S102J
R 4115	(A,141,76)	RS1/16S563J
R 4116	(A,137,63)	RS1/16S103J
R 4117	(B,143,68)	RS1/16S103J
R 4118	(A,134,31)	RS1/16S471J
R 4151	(B,143,62)	RS1/16S103J
R 4152	(B,137,57)	RS1/16S621J
R 4153	(B,140,66)	RS1/16S104J
R 4154	(B,141,70)	RS1/16S473J
R 4155	(B,138,59)	RS1/16S621J
R 4156	(B,135,59)	RS1/16S101J
R 4157	(B,134,61)	RS1/16S101J
R 4158	(B,137,63)	RS1/16S821J
R 4201	(B,77,56)	RS1/16S0R0J
R 4202	(A,140,86)	RS1/16S0R0J
R 4203	(A,11,22)	RS1/16S0R0J
R 4204	(A,106,81)	RS1/16SS0R0J
R 4205	(A,14,19)	RS1/16S0R0J
R 4206	(A,140,8)	RS1/16S0R0J
R 4207	(A,106,79)	RS1/16SS0R0J
R 4208	(A,105,81)	RS1/16SS0R0J
R 4209	(A,107,67)	RS1/16SS0R0J
R 4210	(A,106,67)	RS1/16SS0R0J
R 4211	(A,78,5)	RS1/16S0R0J
R 4212	(A,105,67)	RS1/16SS0R0J
R 4213	(A,86,3)	RS1/16S0R0J
R 4214	(A,109,67)	RS1/16SS0R0J
R 4215	(A,140,5)	RS1/16S0R0J
R 4216	(A,81,85)	RS1/16S0R0J
R 4221	(B,60,11)	RS1/16SS151J
R 4222	(B,61,8)	RS1/16SS151J
R 4223	(B,63,6)	RS1/16SS151J
R 4224	(B,62,10)	RS1/16SS151J
R 4225	(B,63,8)	RS1/16SS151J
R 4226	(B,59,9)	RS1/16SS151J
R 4227	(B,60,9)	RS1/16SS151J
R 4228	(B,61,6)	RS1/16SS151J
R 4229	(B,63,12)	RS1/16SS151J
R 4230	(B,61,10)	RS1/16SS151J
R 4231	(B,61,13)	RS1/16SS472J
R 4232	(B,62,14)	RS1/16SS472J
R 4233	(B,62,13)	RS1/16SS472J
R 4234	(B,59,14)	RS1/16SS471J
R 4235	(B,66,11)	RS1/16SS471J
R 4236	(B,65,6)	RS1/16SS151J
R 4237	(B,69,9)	RS1/16SS471J
R 4238	(B,79,33)	RS1/16S471J
R 4239	(A,59,7)	RS1/16S0R0J
R 4240	(B,67,9)	RS1/16S470J
R 4301	(B,15,59)	RS1/16SS101J
R 4302	(A,14,61)	RAB4CQ101J
R 4303	(B,13,59)	RS1/16SS473J
R 4305	(A,8,57)	RS1/16SS473J
R 4306	(B,13,63)	RS1/16SS473J
R 4351	(A,80,79)	RS1/16SS0R0J
R 4372	(A,81,80)	RS1/16SS432J
R 4373	(A,78,79)	RS1/16SS104J
R 4374	(A,73,86)	RS1/16SS153J
R 4375	(A,72,80)	RS1/16SS104J
R 4376	(A,75,81)	RS1/16SS681J
R 4377	(A,74,80)	RS1/16SS471J
R 4378	(A,68,78)	RS1/16SS272J
R 4379	(A,65,82)	RS1/16SS391J
R 4401	(A,70,63)	RS1/16S472J
R 4402	(A,70,67)	RS1/16S472J
R 4403	(A,70,64)	RS1/16S472J
R 4404	(A,66,61)	RS1/16S472J
R 4405	(A,67,75)	RS1/16S472J
R 4406	(A,70,71)	RS1/16S472J
R 4407	(A,70,69)	RS1/16S472J
R 4408	(A,70,60)	RS1/16S472J
R 4409	(A,70,61)	RS1/16S472J
R 4410	(A,70,66)	RS1/16S472J
R 4415	(B,63,67)	RS1/16S472J
R 4416	(B,67,68)	RS1/16S472J
R 4417	(A,63,61)	RS1/16S472J
R 4418	(A,63,75)	RS1/16S472J
R 4419	(B,67,71)	RS1/16S472J
R 4420	(B,63,70)	RS1/16S472J
R 4421	(B,74,72)	RS1/16S101J
R 4422	(B,74,69)	RS1/16S101J
R 4423	(B,69,72)	RS1/16S101J
R 4424	(B,61,78)	RS1/16SS102J
R 4425	(B,64,77)	RS1/16SS272J
R 4426	(B,62,74)	RS1/16SS472J
R 4427	(B,63,71)	RS1/16S101J
R 4502	(B,71,75)	RS1/16S0R0J
R 4522	(B,76,78)	RS1/16S0R0J
R 4542	(B,74,75)	RS1/16S0R0J
R 4562	(A,59,66)	RS1/16S0R0J
R 4601	(B,28,85)	RS1/16SS1002D
R 4602	(B,24,82)	RS1/16SS1002D
R 4603	(A,21,85)	RS1/16SS1002D
R 4604	(B,31,83)	RS1/16S6202D
R 4605	(B,29,78)	RS1/16S6202D
R 4606	(B,22,81)	RS1/16S6202D
R 4607	(B,25,76)	RS1/16S6202D
R 4608	(A,21,84)	RS1/16S6202D
R 4609	(A,21,82)	RS1/16S6202D
R 4610	(B,28,80)	RS1/16SS102J
R 4611	(B,26,80)	RS1/16SS102J
R 4612	(A,24,82)	RS1/16SS102J
R 4701	(B,20,81)	RS1/16S1102D
R 4703	(A,41,77)	RS1/16SS391J
R 4704	(B,20,77)	RS1/16S2201D
R 4705	(B,18,75)	RS1/16S2201D
R 4706	(A,42,76)	RS1/16SS105J
R 4707	(B,39,74)	RS1/16SS331J
R 4708	(B,37,76)	RS1/16SS152J
R 4709	(B,23,76)	RS1/16SS102J
R 4710	(B,37,84)	RS1/16S0R0J

Circuit Symbol and No.		Part No.
R 4711	(A,20,79)	RS1/16SS0R0J
R 4712	(B,19,75)	RS1/16SS0R0J
R 4716	(A,14,72)	RS1/16S0R0J
R 4717	(A,14,71)	RS1/16S101J
R 4719	(A,14,69)	RS1/16S101J
R 4720	(A,9,70)	RS1/16S470J
R 4721	(A,11,66)	RS1/16S470J
R 4722	(A,8,66)	RS1/16SS471J
R 4723	(A,11,65)	RS1/16SS333J
R 4724	(A,11,68)	RS1/16SS222J
R 4725	(A,9,69)	RS1/16SS152J
R 4726	(A,19,60)	RS1/16SS473J
R 4727	(A,44,41)	RS1/16SS221J
R 4728	(A,43,41)	RS1/16SS221J
R 4729	(A,40,39)	RAB4CQ221J
R 4730	(A,36,38)	RAB4CQ221J
R 4731	(A,31,39)	RAB4CQ221J
R 4732	(A,34,39)	RS1/16SS221J
R 4733	(A,33,39)	RS1/16SS221J
R 4734	(A,22,41)	RAB4CQ221J
R 4735	(A,29,41)	RS1/16SS221J
R 4736	(A,28,41)	RS1/16SS221J
R 4737	(A,24,41)	RS1/16SS221J
R 4738	(A,23,43)	RS1/16SS221J
R 4739	(A,20,43)	RS1/16SS221J
R 4801	(A,4,48)	RAB4CQ221J
R 4803	(B,11,57)	RS1/16S101J
R 4804	(A,14,46)	RS1/16SS681J
R 4806	(B,17,48)	RS1/16S101J
R 4807	(B,17,44)	RS1/16SS472J
R 4808	(A,11,37)	RS1/16S3302F
R 4809	(A,11,41)	RS1/16S223J
R 4811	(A,11,40)	RS1/16S5602F
R 4812	(B,14,39)	RS1/16S101J
R 4813	(B,11,30)	RS1/16SS153J
R 4814	(B,10,38)	RS1/16S153J
R 4815	(B,12,31)	RS1/16SS0R0J
R 4816	(B,12,34)	RS1/16SS0R0J
R 4817	(B,11,38)	RS1/16S100J
R 4818	(B,10,32)	RS1/16SS100J
R 4902	(A,53,40)	RS1/16S6800D
R 4903	(A,53,37)	RS1/16S27R0D
R 4904	(A,52,37)	RS1/16S10R0D
R 4905	(A,52,40)	RS1/16S1000D
R 4906	(A,50,40)	RS1/16S82R0F
R 4907	(A,49,37)	RS1/16S56R0D
R 4908	(A,48,37)	RS1/16S47R0D
R 4909	(A,49,41)	RS1/16S36R0D
R 4910	(A,47,39)	RS1/16S33R0F
R 4911	(A,46,37)	RS1/16S27R0D
R 4912	(A,44,37)	RS1/16S1800D
R 4913	(A,44,39)	RS1/16S82R0F
R 4914	(A,43,37)	RS1/16S12R0F
R 4915	(B,29,32)	RS1/16SS102J
R 4951	(Panel PCB)	RS1/16S331J
R 4952	(Panel PCB)	RS1/16S331J
R 5001	(B,125,58)	RS1/16SS470J
R 5002	(A,120,53)	RS1/16SS103J
R 5003	(A,122,54)	RS1/16S473J
R 5004	(A,124,45)	RS1/16SS471J

Circuit Symbol and No.		Part No.
R 5005	(A,124,46)	RS1/16SS470J
R 5006	(A,123,48)	RS1/16SS473J
R 5007	(A,121,48)	RS1/16SS473J
R 5008	(A,119,51)	RS1/16SS471J
R 5009	(A,119,52)	RS1/16SS471J
R 5010	(A,119,59)	RS1/16SS473J
R 5011	(A,121,57)	RS1/16SS473J
R 5012	(A,121,42)	RS1/16SS471J
R 5013	(A,118,44)	RS1/16SS102J
R 5014	(A,77,38)	RS1/16SS471J
R 5016	(A,125,49)	RS1/16SS473J
R 5017	(A,119,53)	RS1/16SS470J
R 5018	(A,119,56)	RS1/16SS470J
R 5019	(A,120,46)	RS1/16SS470J
R 5020	(A,121,50)	RS1/16SS473J
R 5021	(A,119,50)	RS1/16SS470J
R 5022	(A,123,58)	RS1/16SS471J
R 5023	(A,92,55)	RS1/16SS102J
R 5024	(A,114,58)	RAB4CQ471J
R 5025	(A,112,57)	RS1/16SS473J
R 5026	(A,111,57)	RS1/16SS471J
R 5027	(A,110,57)	RS1/16SS470J
R 5028	(A,110,60)	RS1/16SS470J
R 5029	(B,124,61)	RS1/16SS102J
R 5030	(A,107,60)	RS1/16S473J
R 5031	(A,108,56)	RS1/16SS471J
R 5032	(A,108,58)	RS1/16SS471J
R 5033	(A,103,66)	RS1/16SS124J
R 5034	(A,100,30)	RS1/16SS0R0J
R 5035	(A,99,58)	RS1/16SS473J
R 5036	(A,100,29)	RS1/16SS0R0J
R 5037	(A,99,60)	RS1/16SS473J
R 5039	(A,97,60)	RS1/16SS473J
R 5040	(A,97,57)	RS1/16SS473J
R 5041	(A,96,31)	RS1/16SS104J
R 5042	(A,91,47)	RS1/16SS473J
R 5043	(A,72,51)	RS1/16SS221J
R 5044	(A,73,52)	RS1/16SS221J
R 5045	(A,90,34)	RS1/16SS470J
R 5046	(A,91,36)	RS1/16SS470J
R 5047	(A,89,37)	RS1/16S470J
R 5048	(A,91,53)	RS1/16SS102J
R 5049	(A,86,41)	RS1/16SS471J
R 5050	(A,90,44)	RS1/16SS221J
R 5051	(A,88,44)	RS1/16SS221J
R 5052	(A,92,45)	RS1/16SS221J
R 5053	(A,90,46)	RS1/16SS221J
R 5054	(A,76,53)	RS1/16SS221J
R 5056	(A,93,33)	RS1/16SS103J
R 5057	(A,88,41)	RS1/16SS473J
R 5058	(A,84,45)	RS1/16SS473J
R 5059	(A,112,60)	RS1/16SS473J
R 5060	(A,96,29)	RS1/16SS474J
R 5061	(A,88,47)	RS1/16SS473J
R 5062	(A,102,67)	RS1/16SS102J
R 5063	(A,64,51)	RS1/16SS0R0J
R 5064	(A,90,42)	RS1/16SS470J
R 5065	(A,92,42)	RS1/16SS470J
R 5066	(A,86,42)	RS1/16SS102J
R 5067	(A,86,45)	RS1/16SS470J

Circuit Symbol and No.			Part No.
R	5069	(A,86,50)	RS1/16SS473J
R	5070	(A,87,37)	RS1/16S473J
R	5071	(A,86,51)	RS1/16SS473J
R	5072	(A,90,36)	RS1/16SS473J
R	5073	(A,89,53)	RAB4CQ102J
R	5076	(A,85,48)	RS1/16S153J
R	5077	(A,130,69)	RS1/16SS474J
R	5078	(A,125,62)	RS1/16SS103J
R	5079	(A,133,61)	RS1/16SS103J
R	5080	(A,80,41)	RS1/16SS473J
R	5081	(A,90,35)	RS1/16SS102J
R	5082	(A,90,38)	RS1/16SS102J
R	5083	(A,88,39)	RS1/16SS102J
R	5084	(A,89,34)	RS1/16SS473J
R	5151	(B,132,56)	RS1/16SS473J
R	5152	(B,127,49)	RS1/16SS273J
R	5153	(B,131,50)	RS1/16S563J
R	5154	(B,134,49)	RS1/16S104J
R	5251	(A,103,87)	RS1/16S271J
R	5252	(A,101,86)	RS1/16S103J
R	5271	(B,107,79)	RS1/16S332J
R	5272	(B,98,81)	RS1/16S332J
R	5301	(A,83,22)	RS1/16SS101J
R	5302	(A,82,18)	RAB4CQ101J
R	5303	(A,82,15)	RAB4CQ101J
R	5304	(A,83,12)	RAB4CQ101J
R	5305	(A,83,20)	RS1/16SS101J
R	5306	(A,83,9)	RAB4CQ101J
R	5307	(A,81,6)	RAB4CQ101J
R	5308	(A,84,5)	RS1/16S0R0J
R	5309	(A,112,27)	RAB4CQ101J
R	5310	(A,113,21)	RAB4CQ101J
R	5311	(A,111,12)	RAB4CQ101J
R	5312	(A,109,13)	RS1/16SS101J
R	5313	(A,110,9)	RAB4CQ101J
R	5314	(A,113,6)	RS1/16SS101J
R	5401	(B,119,6)	RS1/16SS103J
R	5402	(B,119,7)	RS1/16SS103J
R	5403	(B,115,6)	RS1/16SS103J
R	5404	(B,116,7)	RS1/16SS103J
R	5405	(B,126,16)	RS1/16SS102J
R	5406	(B,126,20)	RS1/16SS102J
R	5407	(B,119,14)	RS1/16SS105J
R	5408	(B,118,16)	RS1/16SS105J
R	5409	(B,116,14)	RS1/16SS0R0J
R	5410	(B,120,14)	RS1/16SS0R0J
R	5501	(B,121,55)	RAB4CQ470J
R	5502	(B,120,52)	RAB4CQ470J
R	5503	(B,121,49)	RAB4CQ470J
R	5504	(B,119,46)	RAB4CQ101J
R	5505	(B,128,43)	RAB4CQ101J
R	5506	(B,120,41)	RAB4CQ101J
R	5507	(B,124,37)	RAB4CQ101J
R	5508	(B,124,34)	RAB4CQ101J
R	5509	(B,120,33)	RS1/16SS101J
R	5510	(B,122,31)	RS1/16SS101J
R	5511	(B,116,19)	RS1/16SS0R0J
R	5512	(B,117,25)	RS1/16SS105J
R	5513	(B,115,26)	RS1/16S220J
R	5514	(B,117,31)	RS1/16SS473J

Circuit Symbol and No.			Part No.
R	5515	(B,118,22)	RS1/16SS151J
R	5516	(B,114,59)	RAB4CQ470J
R	5517	(B,114,64)	RS1/16S470J
R	5518	(B,109,60)	RS1/16SS473J
R	5519	(B,117,30)	RS1/16SS473J
R	5520	(B,112,23)	RS1/16SS330J
R	5522	(B,111,28)	RS1/16SS102J
R	5523	(B,111,27)	RS1/16SS102J
R	5524	(B,110,28)	RS1/16SS102J
R	5525	(B,110,27)	RS1/16SS102J
R	5526	(B,108,25)	RAB4CQ470J
R	5527	(B,109,62)	RS1/16SS101J
R	5528	(B,108,63)	RS1/16SS151J
R	5529	(B,107,63)	RS1/16SS151J
R	5531	(B,104,62)	RS1/16S473J
R	5532	(B,105,24)	RAB4CQ470J
R	5533	(B,102,25)	RAB4CQ470J
R	5534	(B,102,61)	RS1/16SS101J
R	5535	(B,102,59)	RS1/16SS302J
R	5536	(B,78,54)	RS1/16S101J
R	5537	(B,97,62)	RS1/16S471J
R	5538	(B,96,62)	RS1/16S471J
R	5539	(B,99,24)	RAB4CQ470J
R	5540	(B,97,26)	RS1/16SS470J
R	5541	(B,96,25)	RS1/16SS470J
R	5542	(B,95,26)	RS1/16SS470J
R	5543	(B,95,23)	RS1/16SS470J
R	5544	(B,94,62)	RS1/16S470J
R	5545	(B,81,76)	RS1/16S331J
R	5546	(B,81,73)	RS1/16S331J
R	5547	(B,93,61)	RS1/16SS473J
R	5548	(B,88,60)	RS1/16SS473J
R	5549	(B,88,59)	RS1/16SS473J
R	5550	(B,88,57)	RS1/16SS473J
R	5551	(B,82,72)	RS1/16S331J
R	5552	(B,94,27)	RS1/16SS470J
R	5553	(B,92,26)	RS1/16SS470J
R	5554	(B,92,28)	RAB4CQ680J
R	5555	(B,85,40)	RAB4CQ680J
R	5556	(B,88,24)	RAB4CQ680J
R	5557	(B,88,37)	RS1/16SS470J
R	5558	(B,86,37)	RS1/16SS470J
R	5706	(A,90,65)	RS1/16SS0R0J
R	5707	(A,86,62)	RS1/16SS0R0J
R	5708	(A,82,60)	RS1/16SS0R0J
R	5709	(A,85,60)	RS1/16SS0R0J
R	5801	(B,92,22)	RS1/16S0R0J

CAPACITORS

C	4001	(B,54,62)	CKSYB105K16
C	4002	(A,57,59)	CSZSR330M10
C	4003	(B,58,63)	CKSYB105K16
C	4004	(A,77,18)	CKSRYB104K16
C	4005	(B,63,53)	CSZS100M16
C	4006	(A,59,54)	CSZSR220M10
C	4007	(A,75,17)	CSZSR330M10
C	4008	(A,54,9)	CSZSR220M10
C	4009	(A,65,56)	CSZS100M10
C	4010	(A,63,57)	CKSSYB104K10

Circuit Symbol and No.			Part No.
C 4011	(B,73,62)		CKSSYB104K10
C 4012	(B,71,56)		CKSRYB105K10
C 4013	(A,74,54)		CKSSYB104K10
C 4014	(A,74,56)		CKSQYF105Z25
C 4015	(A,58,16)		CSZS100M16
C 4016	(A,56,16)		CKSRYB105K10
C 4017	(A,55,26)		CKSRYB104K16
C 4018	(B,58,21)		CKSRYB473K50
C 4019	(A,68,24)	68 µF/6.3 V	CCH1440
C 4020	(B,64,21)		CCSRCH331J50
C 4021	(A,67,22)		CKSRYB104K16
C 4022	(B,54,23)		CKSRYB104K16
C 4023	(B,54,25)		CSZS100M16
C 4024	(B,59,20)		CKSRYB103K50
C 4025	(B,64,23)		CCSRCH101J50
C 4026	(B,67,25)		CKSRYB103K50
C 4027	(B,62,22)		CKSRYB393K16
C 4028	(B,58,23)		CKSRYB393K16
C 4029	(A,74,23)		CKSRYB103K50
C 4030	(B,69,28)		CKSRYB104K25
C 4031	(A,75,26)	10 µF	CCG1138
C 4032	(B,55,29)		CKSRYB393K16
C 4033	(A,75,29)	10 µF	CCG1138
C 4034	(A,52,17)		CKSRYB224K16
C 4035	(B,69,29)		CKSRYB105K10
C 4036	(B,70,31)		CKSRYB102K50
C 4037	(A,75,32)	10 µF	CCG1138
C 4039	(A,73,35)		CKSRYB103K50
C 4040	(A,58,33)		CKSRYB102K50
C 4041	(B,70,32)		CKSRYB104K25
C 4042	(B,53,32)		CKSRYB105K10
C 4043	(B,70,36)		CKSRYB105K10
C 4044	(B,69,36)		CKSRYB103K50
C 4045	(B,57,38)		CKSRYB104K16
C 4046	(A,60,34)		CKSYB475K16
C 4047	(B,64,39)		CKSRYB472K50
C 4048	(B,66,39)		CKSRYB472K50
C 4049	(A,65,41)		CKSRYB104K16
C 4050	(A,59,37)		CKSRYB103K50
C 4051	(A,60,39)		CKSRYB104K16
C 4052	(B,59,39)		CKSRYB104K16
C 4053	(B,61,39)		CKSRYB104K16
C 4054	(A,68,42)	33 µF/10 V	CCH1586
C 4055	(A,63,46)		CKSQYF105Z25
C 4056	(B,65,44)		CKSRYB104K25
C 4057	(B,66,45)		CKSQYF105Z25
C 4059	(A,57,44)		CKSQYF105Z25
C 4060	(B,58,45)		CKSQYF105Z25
C 4061	(B,62,45)		CKSQYF225Z16
C 4062	(B,60,45)		CKSQYF225Z16
C 4063	(A,61,41)		CKSRYB105K10
C 4064	(B,56,41)		CKSRYB105K10
C 4065	(A,68,49)		CKSQYF105Z25
C 4066	(A,58,48)		CKSQYF105Z25
C 4067	(B,67,56)		CKSSYB104K10
C 4068	(B,66,57)		CSZS100M10
C 4070	(B,91,70)		CKSYB475K10
C 4071	(A,67,86)		CKSYB475K10
C 4101	(A,113,87)	10 µF	CCG1138
C 4102	(A,116,87)	10 µF	CCG1138

Circuit Symbol and No.			Part No.
C 4103	(B,116,82)		CKSRYB104K16
C 4104	(B,123,77)		CKSRYB105K10
C 4105	(B,136,72)		CKSSYB104K10
C 4106	(A,140,78)		CKSRYB104K16
C 4107	(B,142,81)		CKSRYB104K16
C 4108	(B,138,81)		CKSRYB105K10
C 4110	(B,139,81)		CKSRYB474K10
C 4111	(B,144,81)		CKSRYB332K50
C 4112	(B,141,81)		CKSRYB105K10
C 4113	(B,145,81)		CKSRYB152K50
C 4114	(A,131,74)		CKSRYB104K16
C 4115	(B,135,76)		CKSRYB103K50
C 4116	(B,143,70)		CKSRYB473K50
C 4117	(B,139,70)		CKSRYB473K50
C 4118	(A,141,74)		CKSRYB221K50
C 4119	(A,137,68)	10 µF	CCG1138
C 4120	(A,147,67)	10 µF	CCG1138
C 4121	(A,141,63)		CKSRYB105K10
C 4122	(A,140,63)		CKSRYB105K10
C 4123	(A,134,23)	22 pF	CCG1140
C 4124	(B,133,39)		CKSRYB223K50
C 4151	(B,143,60)		CKSRYB104K16
C 4201	(A,127,15)		CKSRYB102K50
C 4202	(A,127,18)		CKSRYB102K50
C 4203	(A,128,22)		CKSRYB102K50
C 4204	(A,128,25)		CKSRYB102K50
C 4206	(B,96,73)		CKSRYB104K16
C 4207	(B,83,82)		CKSRYB104K16
C 4209	(A,12,25)		CCSRCH101J50
C 4213	(A,82,61)		CCSRCH101J50
C 4214	(A,98,80)		CKSRYB104K16
C 4215	(A,97,78)		CKSRYB104K16
C 4221	(B,64,14)		CKSRYB104K16
C 4222	(B,69,10)		CKSRYB104K16
C 4224	(B,69,14)		CKSRYB104K16
C 4225	(B,78,25)		CKSRYB104K16
C 4302	(A,3,58)		CKSSYB104K10
C 4303	(A,6,59)		CKSSYB104K10
C 4304	(A,4,50)		CKSSYB104K10
C 4305	(A,4,61)		CSZS100M10
C 4351	(A,80,72)	10 µF	CCG1171
C 4352	(A,78,72)	10 µF	CCG1171
C 4355	(A,76,79)		CKSSYB104K10
C 4371	(A,79,82)	10 µF	CCG1171
C 4372	(A,75,80)		CCSSCH680J50
C 4373	(A,71,78)		CCSSCH101J50
C 4374	(A,71,76)		CCSSCK2R0C50
C 4375	(A,70,78)		CCSSCH680J50
C 4376	(A,66,83)		CKSSYB104K10
C 4377	(A,69,82)		CSZSR330M10
C 4401	(A,73,62)	10 µF	CCG1171
C 4402	(A,73,66)	10 µF	CCG1171
C 4403	(A,73,67)	10 µF	CCG1171
C 4404	(A,73,64)	10 µF	CCG1171
C 4405	(A,73,71)	10 µF	CCG1171
C 4406	(A,73,69)	10 µF	CCG1171
C 4407	(A,77,61)	10 µF	CCG1171
C 4408	(A,73,60)	10 µF	CCG1171
C 4409	(A,66,63)		CCSRCH6R0D50
C 4410	(A,67,73)		CCSRCH6R0D50

Circuit Symbol and No.		Part No.
C 4411	(A,63,63)	CCSRCH6R0D50
C 4412	(A,63,73)	CCSRCH6R0D50
C 4413	(B,62,78)	CKSSYB104K10
C 4414	(B,62,76)	CKSSYB102K50
C 4415	(B,64,75)	CKSSYB104K10
C 4601	(B,32,84) 2.2 μF	CCG1179
C 4602	(B,24,84) 2.2 μF	CCG1179
C 4603	(A,23,87) 2.2 μF	CCG1179
C 4701	(A,43,77)	CCSSCH9R0D50
C 4702	(B,21,84) 2.2 μF	CCG1179
C 4704	(A,40,80)	CCSSCH9R0D50
C 4705	(B,38,79)	CKSSYB104K10
C 4706	(B,37,78)	CCSSCH4R0C50
C 4707	(A,32,80)	CKSSYB104K10
C 4708	(A,30,80)	CKSSYB104K10
C 4709	(A,29,80)	CKSSYB104K10
C 4712	(A,28,80)	CKSSYB104K10
C 4713	(A,26,80)	CKSSYB104K10
C 4714	(A,25,80)	CKSSYB104K10
C 4715	(A,24,80)	CKSSYB104K10
C 4717	(A,21,75)	CKSSYB104K10
C 4719	(A,45,76)	CKSSYB104K10
C 4720	(A,46,75)	CKSSYB104K10
C 4721	(A,49,72)	CKSSYB104K10
C 4722	(A,45,78)	CKSSYB104K10
C 4723	(A,39,76)	CKSSYB104K10
C 4724	(B,40,72)	CKSSYB103K16
C 4725	(B,39,72)	CCSSCH181J25
C 4726	(A,37,76)	CKSSYB104K10
C 4727	(B,37,73)	CKSSYB104K10
C 4728	(B,36,70)	CKSSYB104K10
C 4729	(B,35,69)	CKSSYB104K10
C 4730	(A,34,78)	CKSSYB104K10
C 4731	(A,34,76)	CKSSYB104K10
C 4732	(B,34,69)	CKSSYB104K10
C 4733	(B,32,70)	CKSSYB104K10
C 4734	(A,32,76)	CKSSYB104K10
C 4735	(B,30,71)	CKSSYB104K10
C 4736	(A,29,76)	CKSSYB104K10
C 4737	(B,28,71)	CKSSYB104K10
C 4738	(B,27,71)	CKSSYB104K10
C 4739	(A,26,76)	CKSSYB104K10
C 4740	(A,24,76)	CKSRYB104K16
C 4741	(A,19,73)	CKSSYB104K10
C 4742	(A,19,69)	CKSSYB104K10
C 4743	(A,49,68)	CKSSYB104K10
C 4744	(A,49,66)	CKSSYB104K10
C 4745	(A,19,67)	CKSSYB104K10
C 4746	(A,19,65)	CKSSYB104K10
C 4747	(A,49,62)	CKSSYB104K10
C 4748	(A,49,60)	CKSSYB104K10
C 4749	(A,49,56)	CKSSYB104K10
C 4750	(B,14,66)	CKSSYB104K10
C 4751	(A,19,62)	CKSSYB104K10
C 4753	(A,18,58)	CKSSYB104K10
C 4754	(A,19,57)	CKSSYB104K10
C 4755	(A,49,54)	CKSSYB104K10
C 4756	(A,49,50)	CKSSYB104K10
C 4757	(A,19,55)	CKSSYB104K10
C 4759	(A,18,54)	CKSSYB104K10
C 4760	(A,19,53)	CKSSYB104K10
C 4761	(A,19,51)	CKSSYB104K10
C 4762	(A,19,48)	CKSRYB105K10
C 4763	(A,47,47)	CKSSYB104K10
C 4764	(A,45,46)	CKSSYB104K10
C 4765	(A,40,46)	CKSSYB104K10
C 4766	(A,38,45)	CKSSYB104K10
C 4767	(A,38,46)	CKSSYB104K10
C 4768	(A,33,46)	CKSSYB104K10
C 4769	(A,28,45)	CKSSYB104K10
C 4770	(A,27,46)	CKSSYB104K10
C 4771	(A,54,52)	CSZSR330M10
C 4803	(A,13,55)	CSZS100M16
C 4805	(A,17,43)	CKSSYB104K10
C 4807	(B,10,47)	CKSSYB104K10
C 4808	(B,14,46)	CKSRYB105K10
C 4809	(B,17,46)	CKSRYB105K10
C 4810	(A,6,32)	CKSSYB104K10
C 4811	(A,4,39)	CKSRYB104K25
C 4812	(A,5,30)	CSZSR220M16
C 4813	(A,4,42) 4.7 μF	CCG1111
C 4814	(A,11,34)	CKSRYB105K10
C 4815	(A,4,33)	CKSRYB104K16
C 4901	(A,51,48)	CKSSYB104K10
C 4902	(B,55,45)	CKSSYB104K10
C 4903	(A,51,44)	CSZS100M16
C 4904	(A,24,39)	CKSSYB104K10
C 4905	(A,21,39)	CKSSYB104K10
C 4906	(A,16,39)	CKSRYB104K25
C 4907	(A,14,38)	CKSRYB104K25
C 4908	(A,27,35)	CSZSR220M16
C 4909	(A,23,36)	CSZS100M16
C 4910	(A,12,30) 4.7 μF	CCG1111
C 4911	(A,18,36)	CKSQYF334Z25
C 4912	(A,28,33)	CKSSYB104K10
C 4913	(A,26,33)	CKSSYB104K10
C 4914	(A,22,33)	CKSRYB104K25
C 4915	(A,15,33)	CKSRYB104K25
C 4951	(Panel PCB)	CKSRYB104K16
C 4952	(Panel PCB)	CKSRYB104K16
C 5001	(B,128,61)	CKSRYB104K16
C 5002	(A,118,46)	CKSSYB104K10
C 5003	(A,118,38)	CKSSYB104K10
C 5004	(A,121,51)	CKSSYB102K50
C 5005	(A,116,56)	CKSSYB104K10
C 5006	(A,129,57)	CKSSYB104K10
C 5007	(A,109,31)	CKSSYB104K10
C 5008	(A,106,57)	CKSSYB104K10
C 5009	(A,104,30)	CKSSYB104K10
C 5010	(A,100,57)	CKSSYB104K10
C 5011	(A,102,62)	CKSRYB105K10
C 5012	(A,98,30)	CKSSYB104K10
C 5013	(A,95,58)	CCSRCH102J25
C 5014	(A,95,56)	CKSRYB104K16
C 5015	(A,90,40)	CKSSYB104K10
C 5017	(B,111,78)	CKSYB475K10
C 5018	(A,89,27)	CKSSYB103K16
C 5019	(A,83,25)	CKSYB475K10
C 5020	(A,92,48)	CKSSYB104K10
C 5021	(B,123,59)	CKSRYB102K50

Circuit Symbol and No.		Part No.
C 5022	(A,121,77)	CKSRYB104K16
C 5023	(A,124,74)	CSZSC101M10
C 5024	(A,125,68)	CKSSYB104K10
C 5025	(A,90,56)	CKSSYB103K16
C 5026	(A,119,65)	CKSRYB104K16
C 5027	(A,121,64)	CSZSC101M10
C 5151	(B,132,54)	CKSSYB104K10
C 5152	(B,134,47)	CKSSYB104K10
C 5153	(B,132,53)	CKSSYB104K10
C 5154	(B,134,45)	CKSSYB104K10
C 5155	(A,131,57)	CKSRYB105K10
C 5301	(A,110,15)	CKSRYB105K10
C 5302	(A,86,30)	CSZSC101M10
C 5303	(A,88,31)	CKSRYB104K16
C 5401	(B,126,14)	CKSSYB473K10
C 5402	(B,122,7)	CKSSYB102K50
C 5403	(B,118,14)	CKSSYB102K50
C 5404	(B,116,16)	CKSSYB102K50
C 5405	(B,127,19)	CKSSYB473K10
C 5501	(B,114,19)	CKSSYB104K10
C 5502	(A,117,76)	CSZSC101M10
C 5503	(A,118,71)	CKSRYB105K10
C 5504	(B,118,54)	CKSRYB105K10
C 5505	(B,118,49)	CKSRYB105K10
C 5506	(B,118,42)	CKSRYB105K10
C 5507	(B,118,36)	CKSRYB105K10
C 5508	(B,118,24)	CCSRCH5R0D50
C 5509	(B,118,27)	CCSRCH5R0D50
C 5510	(B,111,60)	CKSRYB105K10
C 5511	(B,115,28)	CCSRCH220J50
C 5512	(B,110,23)	CKSRYB105K10
C 5513	(B,108,29)	CKSRYB105K10
C 5514	(B,111,25)	CKSSYB471K50
C 5515	(B,110,25)	CKSSYB471K50
C 5516	(B,105,60)	CKSRYB105K10
C 5517	(B,86,77)	CKSYB475K10
C 5518	(B,104,29)	CKSRYB105K10
C 5519	(B,101,65)	CKSSYB104K10
C 5520	(B,81,52)	CKSSYB104K10
C 5521	(B,101,59)	CKSSYB104K10
C 5522	(B,88,73)	CKSYB475K10
C 5523	(B,86,69)	CKSYB475K10
C 5524	(B,99,29)	CKSRYB105K10
C 5525	(B,91,63)	CCSRCH101J50
C 5526	(B,96,60)	CKSRYB105K10
C 5527	(B,88,48)	CKSRYB105K10
C 5528	(B,88,44)	CKSRYB105K10
C 5529	(B,88,39)	CKSRYB105K10
C 5530	(B,88,34)	CKSRYB105K10
C 5531	(B,95,29)	CKSRYB105K10
C 5701	(A,82,52)	CKSSYB103K16
C 5702	(A,79,56)	CCSRCH150J50
C 5703	(A,90,63)	CKSSYB104K10
C 5801	(B,105,6)	CKSRYB105K10
C 5802	(B,108,7)	CKSRYB105K10
C 5803	(B,98,6)	CKSRYB105K10
C 5804	(B,95,7)	CKSRYB105K10
C 5805	(B,83,6)	CKSRYB105K10
C 5806	(A,81,30)	CSZSC101M10
C 5807	(B,83,21)	CKSRYB104K16
C 5808	(B,102,22)	CKSRYB105K10
C 5809	(B,98,21)	CKSRYB105K10

H

Unit Number : CWN1686
Unit Name : Key Unit

MISCELLANEOUS

IC 4251	IC	SBX3050-01
D 4251	LED	SML412BC5T(MN)
D 4252	LED	SML412BC5T(MN)
D 4253	LED	SML412BC5T(MN)
D 4254	LED	SML412BC5T(MN)
D 4255	LED	SML412BC5T(MN)
D 4256	LED	SML412BC5T(MN)
D 4257	LED	SML412BC5T(MN)
D 4258	LED	SML412BC5T(MN)
D 4259	LED	SML412BC5T(MN)
D 4260	LED	SML412BC5T(MN)
S 4251	Push Switch	CSG1155
S 4252	Push Switch	CSG1155
S 4253	Push Switch	CSG1155
S 4254	Push Switch	CSG1155
S 4255	Push Switch	CSG1155
S 4256	Push Switch	CSG1155
S 4257	Push Switch	CSG1155
S 4258	Push Switch	CSG1155
S 4259	Push Switch	CSG1155
S 4260	Push Switch	CSG1155
S 4261	Push Switch	CSG1155

RESISTORS

R 4251	RS1/16S222J
R 4252	RS1/16S472J
R 4253	RS1/16S103J
R 4254	RS1/16S222J
R 4255	RS1/16S472J
R 4256	RS1/16S103J
R 4257	RS1/16S222J
R 4258	RS1/16S472J
R 4259	RS1/16S103J

CAPACITORS

C 4251	CKSRYB104K50
C 4252	CKSRYB104K50
C 4253	CKSRYB104K50
C 4254	CKSRYB104K50
C 4255	CKSRYB104K50
C 4256	CKSRYB104K50
C 4257	CKSRYB104K50
C 4258	CKSRYB104K50
C 4259	CKSRYB104K50
C 4260	CKSRYB104K50
C 4261	CKSRYB104K50

I

Unit Number : CZW5026
Unit Name : Main PCB Unit

MISCELLANEOUS

Circuit Symbol and No.		Part No.
IC 1	IC	BA6288FS
IC 2	IC	S-812C50AMC-C3E
IC 3	IC	TC7W14FU
IC 4	Photo-interrupter	GP2L24B
IC 5	Photo-interrupter	GP2L24B
Q 1	Transistor	2SB1185
Q 2	Transistor	IMX1
D 1	Diode	HZU6R2(B2)
L 2	Inductor	LCTAW2R2J2520
⚠FU1	Fuse 2 A	CEK1304

RESISTORS

Circuit Symbol and No.	Part No.
R 1	RS1/16S223J
R 2	RS1/8S271J
R 3	RS1/16S332J
R 4	RS1/16S471J
R 5	RS1/16S222J
R 11	RS1/10S0R0J
R 12	RS1/16S222J
R 13	RS1/16S222J
R 14	RS1/16S821J
R 15	RS1/16S821J
R 19	RS1/16S102J
R 20	RS1/16S102J
R 21	RS1/16S102J
R 22	RS1/16S102J

CAPACITORS

Circuit Symbol and No.	Part No.
C 1	CKSRYB153K50
C 2	CZC5169
C 3	CKSRYB105K10
C 7	CEVW100M16
C 8	CKSRYB104K50
C 9	CKSRYB473K50
C 10	CKSRYB473K50
C 11	CEVW100M16
C 12	CEVW100M16
C 13	CKSRYB104K50
C 14	CKSRYB104K50

D

Unit Number : CWX3333
Unit Name : DVD Core Unit

MISCELLANEOUS

Circuit Symbol and No.			Part No.
IC 1001	(A,7,9)	IC	S-L2980A50MC-C7J
IC 1003	(A,83,36)	IC	LTC3411EMS
IC 1201	(A,23,73)	IC	AN8471SAT1
IC 1240	(A,49,74)	IC	BD7962FM
IC 1501	(A,86,79)	IC	MN35104UB
IC 1570	(B,68,87)	IC	EDS1232AATA-75
IC 1601	(B,108,57)	IC	PD6541B
IC 1602	(B,120,62)	IC	TC7SH86FUS1
IC 1651	(B,108,27)	IC	M5M5V216ATP-70HI
IC 1652	(B,98,36)	IC	TC7SZ126FU
IC 1671	(B,108,43)	IC	TC74LCX16373AFT
IC 1672	(B,98,40)	IC	TC7SZ08FU
IC 1801	(B,33,92)	IC	SM8707LV
IC 1802	(B,33,81)	IC	TC7WH157FU
IC 1851	(B,16,87)	IC	PCM1742KE
IC 1852	(B,17,79)	IC	NJM2100V
IC 1853	(B,17,74)	IC	NJM2100V
IC 1901	(A,23,56)	IC	BA033SFP
IC 2001	(A,108,39)	IC	PE5555A
IC 2002	(A,98,28)	IC	BR93L56RFVM-W
IC 2003	(A,98,23)	IC	TC74HC4053AFT
IC 2006	(B,122,25)	IC	NJM2904V
Q 1002	(A,76,37)	Transistor	DTC114EU
Q 1101	(A,53,91)	Transistor	2SB1260
Q 1102	(A,53,97)	Transistor	2SB1260
Q 1103	(A,58,102)	Transistor	DTC114EU
Q 1104	(A,55,102)	Transistor	2SA1576
Q 1105	(A,50,102)	Transistor	2SC4081
Q 1106	(A,63,93)	Transistor	2SC4081
Q 1107	(A,63,99)	Transistor	2SC4081
Q 1551	(A,107,98)	Transistor	2SA1576
Q 2001	(A,123,42)	Transistor	2SA2018
D 1001	(A,12,7)	Diode	1SR154-400
D 1101	(A,49,91)	Diode	1SS355
D 1102	(A,49,96)	Diode	1SS355
D 2001	(B,94,36)	Diode	DAN202U
L 1001	(A,77,30)	Inductor	CTF1623
L 1002	(A,86,26)	Inductor	CTF1624
L 1022	(A,9,5)	Inductor	CTF1558
L 1101	(A,19,99)	Inductor	CTF1305
L 1501	(A,118,69)	Inductor	CTF1378
L 1502	(A,121,61)	Inductor	CTF1487
L 1503	(B,75,71)	Inductor	CTF1488
L 1554	(A,89,98)	Inductor	CTF1473
L 1555	(A,90,100)	Inductor	CTF1473
L 1556	(A,96,103)	Inductor	CTF1400
L 1557	(A,103,102)	Inductor	CTF1395
L 1558	(A,106,84)	Inductor	CTF1473
L 1559	(A,73,101)	Inductor	CTF1387
L 1561	(A,112,97)	Inductor	CTF1473
L 1601	(B,112,68)	Inductor	CTF1464
L 1651	(B,120,35)	Inductor	CTF1464
L 1671	(B,120,39)	Inductor	CTF1473
L 1801	(B,27,93)	Inductor	CTF1558
L 1802	(B,27,90)	Inductor	CTF1558
L 1803	(B,30,76)	Inductor	CTF1464
L 1804	(B,35,76)	Inductor	CTF1385
L 1805	(B,35,87)	Inductor	CTF1385
L 1851	(B,25,89)	Inductor	CTF1379
L 1852	(B,25,83)	Inductor	CTF1473
L 1901	(B,17,15)	Inductor	CTF1487
L 1902	(A,14,20)	Inductor	CTF1558
L 1903	(A,16,22)	Inductor	CTF1558
L 1904	(B,23,24)	Inductor	CTF1468
L 1907	(B,23,22)	Inductor	CTF1558
X 1801	(B,34,99)	Reconator 27.000 MHz	CSS1661
X 2001	(A,109,50)	Resonator 9.830 MHz	CSS1684
VR1551	(A,86,103)	Semi-fixed 10kΩ(B)	CCP1448
EF1570	(B,75,74)	EMI Filter	DTF1106
EF1801	(B,27,87)	EMI Filter	DTL1106
EF1802	(B,30,79)	EMI Filter	DTL1106

Circuit Symbol and No.			Part No.
EF1803	(B,27,96)	EMI Filter	DTL1106
EF1901	(A,11,20)	EMI Filter	DTL1106
EF1902	(A,13,22)	EMI Filter	DTL1106
EF1903	(B,21,24)	EMI Filter	DTL1106
EF1905	(B,13,15)	EMI Filter	DTF1106
EF1907	(B,21,22)	EMI Filter	DTL1106

RESISTORS

Circuit Symbol and No.		Part No.
R 1003	(A,85,41)	RS1/16SS1003D
R 1005	(A,83,41)	RS1/16SS1501D
R 1006	(A,85,42)	RS1/16SS8202D
R 1007	(A,83,42)	RS1/16SS1502D
R 1008	(A,81,42)	RS1/16SS101J
R 1010	(A,88,37)	RS1/16SS105J
R 1011	(A,79,37)	RS1/16SS105J
R 1013	(A,85,39)	RS1/16SS103J
R 1014	(A,79,39)	RS1/16SS1203D
R 1015	(A,78,39)	RS1/16SS2402D
R 1016	(A,77,39)	RS1/16SS0R0J
R 1017	(A,75,39)	RS1/16SS0R0J
R 1018	(A,89,37)	RS1/16SS105J
R 1021	(A,83,39)	RS1/16SS122J
R 1101	(A,61,90)	RS1/16S6R8J
R 1102	(A,57,91)	RS1/16SS3R9J
R 1103	(A,57,89)	RS1/16SS3R9J
R 1104	(A,56,89)	RS1/16SS3R9J
R 1105	(A,56,91)	RS1/16SS3R9J
R 1106	(A,61,97)	RS1/16S6R8J
R 1107	(A,57,98)	RS1/16SS3R9J
R 1108	(A,57,96)	RS1/16SS3R9J
R 1109	(A,56,96)	RS1/16SS3R9J
R 1110	(A,56,98)	RS1/16SS3R9J
R 1111	(A,54,104)	RS1/16SS272J
R 1112	(A,57,104)	RS1/16SS472J
R 1113	(A,50,104)	RS1/16SS102J
R 1114	(A,56,94)	RS1/16SS221J
R 1115	(A,57,100)	RS1/16SS221J
R 1116	(A,63,95)	RS1/16SS331J
R 1117	(A,63,101)	RS1/16SS221J
R 1120	(A,57,93)	RS1/16SS0R0J
R 1201	(A,18,96)	RS1/16SS181J
R 1202	(A,14,95)	RS1/16SS181J
R 1203	(A,16,74)	RS1/16SS513J
R 1204	(A,16,71)	RS1/16SS221J
R 1206	(A,29,70)	RS1/16SS513J
R 1209	(A,19,88)	RS1/10S391J
R 1210	(A,15,88)	RS1/10S391J
R 1211	(A,29,76)	RS1/16SS1R0J
R 1212	(A,29,75)	RS1/16SS1R0J
R 1213	(A,29,74)	RS1/16SS1R0J
R 1214	(A,29,73)	RS1/16SS1R0J
R 1215	(A,29,72)	RS1/16SS1R0J
R 1216	(A,29,71)	RS1/16SS1R0J
R 1217	(A,15,75)	RS1/16SS102J
R 1251	(A,54,84)	RS1/16SS102J
R 1252	(A,51,85)	RS1/16SS472J
R 1253	(A,52,82)	RS1/16SS823J
R 1254	(A,52,84)	RS1/16SS122J
R 1255	(A,51,84)	RS1/16SS122J

Circuit Symbol and No.		Part No.
R 1256	(A,51,82)	RS1/16SS682J
R 1257	(A,54,82)	RAB4CQ103J
R 1258	(A,47,84)	RS1/16SS223J
R 1259	(A,45,84)	RS1/16SS223J
R 1260	(A,46,82)	RS1/16SS393J
R 1261	(A,45,82)	RS1/16SS393J
R 1262	(A,54,67)	RS1/16SS273J
R 1263	(A,53,67)	RS1/16SS153J
R 1264	(A,52,67)	RS1/16SS102J
R 1265	(A,48,67)	RS1/16SS183J
R 1266	(A,47,67)	RS1/16SS333J
R 1272	(A,47,85)	RS1/16SS102J
R 1273	(A,45,85)	RS1/16SS102J
R 1274	(A,56,83)	RS1/10S0R0J
R 1501	(A,89,58)	RS1/16SS0R0J
R 1502	(A,80,63)	RS1/16SS0R0J
R 1503	(A,81,60)	RAB4CQ101J
R 1504	(A,82,58)	RS1/16SS0R0J
R 1505	(A,83,58)	RS1/16SS0R0J
R 1506	(A,84,60)	RAB4CQ101J
R 1507	(A,86,63)	RS1/16SS0R0J
R 1508	(A,87,60)	RAB4CQ101J
R 1509	(A,87,58)	RS1/16SS0R0J
R 1511	(A,90,60)	RAB4CQ101J
R 1512	(A,90,58)	RS1/16SS0R0J
R 1513	(A,92,59)	RS1/16SS473J
R 1514	(A,93,61)	RS1/16SS104J
R 1515	(A,105,66)	RS1/16SS222J
R 1521	(A,96,57)	RS1/16SS0R0J
R 1522	(A,103,68)	RS1/16SS103J
R 1523	(A,94,61)	RS1/16SS104J
R 1525	(A,95,59)	RS1/16SS102J
R 1526	(A,94,57)	RS1/16SS0R0J
R 1529	(A,95,57)	RS1/16SS0R0J
R 1530	(A,97,63)	RS1/16SS104J
R 1531	(A,99,60)	RS1/16S221J
R 1532	(A,100,60)	RS1/16SS104J
R 1536	(A,99,63)	RS1/16SS104J
R 1537	(A,100,63)	RS1/16SS104J
R 1539	(A,103,75)	RS1/16SS104J
R 1540	(A,103,70)	RS1/16SS221J
R 1541	(A,104,71)	RS1/16SS473J
R 1543	(A,103,72)	RS1/16SS104J
R 1544	(A,103,74)	RS1/16SS102J
R 1545	(A,104,74)	RS1/16SS102J
R 1546	(A,105,64)	RS1/16SS104J
R 1547	(A,104,75)	RS1/16SS330J
R 1548	(A,95,61)	RS1/16SS104J
R 1555	(A,79,98)	RS1/16S101J
R 1556	(A,80,101)	RS1/16S101J
R 1558	(A,85,96)	RS1/16SS750J
R 1561	(A,88,96)	RS1/16SS153J
R 1562	(A,109,96)	RS1/16SS471J
R 1563	(A,110,96)	RS1/16SS471J
R 1565	(A,112,95)	RS1/16S68R0D
R 1566	(A,114,95)	RS1/16S4R7J
R 1567	(A,83,102)	RS1/16SS273J
R 1568	(A,83,104)	RS1/16SS183J
R 1569	(A,84,98)	RS1/16SS153J
R 1570	(A,81,101)	RS1/16SS222J

Circuit Symbol and No.		Part No.
R 1571	(A,73,99)	RAB4CQ101J
R 1572	(A,73,96)	RAB4CQ101J
R 1573	(A,67,91)	RAB4CQ101J
R 1574	(A,67,88)	RAB4CQ101J
R 1575	(A,67,86)	RS1/16SS560J
R 1576	(A,67,85)	RS1/16SS560J
R 1577	(A,67,83)	RAB4CQ560J
R 1578	(A,67,81)	RAB4CQ560J
R 1579	(A,69,79)	RS1/16SS220J
R 1580	(A,67,78)	RAB4CQ560J
R 1581	(A,67,76)	RS1/16SS560J
R 1582	(A,67,75)	RS1/16SS560J
R 1583	(A,67,74)	RS1/16SS560J
R 1584	(A,67,72)	RAB4CQ560J
R 1585	(A,67,70)	RS1/16SS560J
R 1586	(A,67,69)	RS1/16SS560J
R 1587	(A,67,67)	RAB4CQ101J
R 1588	(A,67,64)	RAB4CQ101J
R 1589	(A,74,60)	RAB4CQ101J
R 1590	(A,77,60)	RAB4CQ101J
R 1593	(B,61,86)	RS1/16SS104J
R 1595	(A,78,101)	RS1/16SS101J
R 1599	(A,71,101)	RS1/16S221J
R 1604	(B,120,60)	RS1/16SS0R0J
R 1608	(B,94,52)	RS1/16SS104J
R 1613	(B,96,64)	RS1/16SS0R0J
R 1621	(B,119,57)	RS1/16SS0R0J
R 1652	(B,103,35)	RS1/16SS104J
R 1653	(B,101,35)	RS1/16SS510J
R 1671	(B,103,49)	RAB4CQ101J
R 1672	(B,107,50)	RAB4CQ101J
R 1673	(B,109,50)	RAB4CQ101J
R 1674	(B,113,49)	RAB4CQ101J
R 1675	(B,101,41)	RS1/16SS331J
R 1701	(A,103,69)	RS1/16SS103J
R 1702	(A,105,68)	RS1/16SS103J
R 1705	(A,90,98)	RN1/16SE1002D
R 1709	(A,93,100)	RS1/16S1502D
R 1710	(A,95,98)	RS1/16SS102J
R 1711	(A,97,99)	RS1/16SS683J
R 1712	(A,98,96)	RS1/16SS103J
R 1713	(A,99,96)	RS1/16SS103J
R 1714	(A,101,96)	RS1/16SS0R0J
R 1715	(A,104,94)	RS1/16SS0R0J
R 1716	(A,104,93)	RS1/16SS0R0J
R 1717	(A,104,92)	RS1/16SS0R0J
R 1718	(A,103,91)	RS1/16SS103J
R 1719	(A,104,91)	RS1/16SS103J
R 1720	(A,103,90)	RS1/16SS103J
R 1721	(A,104,90)	RS1/16SS103J
R 1723	(A,106,87)	RN1/16SE3901D
R 1729	(A,105,81)	RAB4CQ220J
R 1730	(A,105,78)	RAB4CQ220J
R 1733	(B,92,87)	RS1/16SS104J
R 1734	(B,91,87)	RS1/16SS104J
R 1801	(B,31,87)	RS1/16S0R0J
R 1802	(B,29,94)	RS1/16S151J
R 1803	(B,29,87)	RS1/16S151J
R 1804	(B,32,87)	RS1/16S221J
R 1805	(B,37,87)	RS1/16S271J

Circuit Symbol and No.		Part No.
R 1806	(B,33,86)	RS1/16SS104J
R 1809	(B,33,77)	RS1/16SS0R0J
R 1821	(B,37,81)	RS1/16SS222J
R 1823	(B,36,96)	RS1/16SS101J
R 1825	(B,35,79)	RS1/16SS101J
R 1851	(B,11,91)	RS1/16SS0R0J
R 1856	(B,14,77)	RS1/16SS102J
R 1857	(B,14,82)	RS1/16SS102J
R 1858	(B,11,77)	RS1/16SS222J
R 1859	(B,11,82)	RS1/16SS222J
R 1860	(B,12,77)	RS1/16SS472J
R 1861	(B,12,82)	RS1/16SS472J
R 1862	(B,12,75)	RS1/16SS472J
R 1863	(B,12,80)	RS1/16SS472J
R 1864	(B,10,73)	RS1/16SS103J
R 1865	(B,10,78)	RS1/16SS103J
R 1866	(B,12,73)	RS1/16SS472J
R 1867	(B,12,78)	RS1/16SS472J
R 1868	(B,19,71)	RS1/16SS821J
R 1869	(B,12,71)	RS1/16SS821J
R 1870	(B,18,66)	RS1/16SS104J
R 1871	(B,12,66)	RS1/16SS104J
R 1875	(B,16,91)	RS1/16SS0R0J
R 1897	(B,37,84)	RS1/16SS101J
R 1901	(A,18,24)	RS1/16SS221J
R 1903	(A,20,26)	RS1/16SS221J
R 1905	(A,18,50)	RS1/16SS102J
R 1922	(A,16,30)	RS1/16SS0R0J
R 1923	(A,117,82)	RS1/16SS221J
R 1924	(B,26,33)	RS1/16S221J
R 1927	(A,15,30)	RS1/16SS0R0J
R 1931	(B,25,26)	RS1/16SS0R0J
R 1933	(B,25,27)	RS1/16SS0R0J
R 1938	(A,16,36)	RS1/16SS0R0J
R 1945	(B,24,36)	RS1/16SS0R0J
R 1947	(A,115,77)	RS1/16SS221J
R 1954	(A,16,26)	RS1/16SS221J
R 1955	(A,18,27)	RS1/16SS221J
R 2000	(A,118,32)	RS1/16SS104J
R 2001	(A,120,32)	RS1/16SS104J
R 2002	(A,118,34)	RS1/16SS472J
R 2003	(A,118,35)	RS1/16SS104J
R 2006	(A,118,37)	RS1/16SS104J
R 2007	(A,120,37)	RS1/16SS104J
R 2008	(A,118,38)	RS1/16SS104J
R 2009	(A,120,38)	RS1/16SS103J
R 2010	(A,105,27)	RS1/16SS473J
R 2011	(A,118,40)	RS1/16SS103J
R 2012	(A,120,41)	RS1/16SS103J
R 2013	(A,120,42)	RS1/16SS223J
R 2016	(A,120,45)	RS1/16SS184J
R 2021	(A,104,52)	RS1/16SS104J
R 2022	(A,99,49)	RS1/16S221J
R 2023	(A,95,46)	RS1/16S221J
R 2037	(A,98,34)	RS1/16SS104J
R 2038	(A,96,32)	RS1/16SS104J
R 2040	(A,103,29)	RS1/16SS104J
R 2041	(A,104,27)	RS1/16SS221J
R 2042	(A,104,29)	RS1/16SS104J
R 2043	(A,106,29)	RS1/16SS104J

Circuit Symbol and No.		Part No.
R 2044	(A,106,27)	RS1/16SS104J
R 2045	(A,107,29)	RS1/16SS104J
R 2046	(A,107,27)	RS1/16SS104J
R 2047	(A,108,29)	RS1/16SS104J
R 2048	(A,108,27)	RS1/16SS104J
R 2049	(A,109,29)	RS1/16SS104J
R 2050	(A,109,24)	RS1/16SS104J
R 2051	(A,112,24)	RS1/16SS104J
R 2054	(A,110,29)	RS1/16SS104J
R 2055	(A,112,29)	RS1/16SS104J
R 2057	(A,113,27)	RS1/16SS104J
R 2059	(A,120,34)	RS1/16SS104J
R 2060	(A,118,46)	RS1/16SS473J
R 2061	(A,118,45)	RS1/16SS682J
R 2062	(A,112,51)	RS1/16SS473J
R 2063	(A,106,54)	RS1/16SS104J
R 2064	(A,105,54)	RS1/16SS222J
R 2065	(A,106,52)	RS1/16SS473J
R 2067	(A,105,52)	RS1/16SS473J
R 2068	(A,104,49)	RS1/16SS104J
R 2073	(A,96,31)	RS1/16SS473J
R 2074	(A,98,31)	RS1/16SS472J
R 2075	(A,102,29)	RS1/16SS473J
R 2076	(B,92,42)	RS1/16SS0R0J
R 2077	(A,122,39)	RS1/16SS272J
R 2078	(A,123,39)	RS1/16SS103J
R 2080	(A,103,23)	RS1/16SS272J
R 2081	(A,103,22)	RS1/16SS243J
R 2082	(A,104,50)	RS1/16SS221J
R 2083	(B,92,44)	RS1/16SS221J
R 2084	(A,97,35)	RS1/16SS221J
R 2086	(A,98,33)	RS1/16SS0R0J
R 2087	(A,83,51)	RS1/16S0R0J
R 2092	(A,105,25)	RS1/16SS103J
R 2093	(A,106,25)	RS1/16SS103J
R 2094	(A,120,28)	RS1/16S0R0J
R 2096	(A,98,48)	RS1/16SS104J
R 2097	(A,102,27)	RS1/16SS104J
R 2098	(A,115,29)	RS1/16SS104J
R 2109	(A,108,48)	RS1/16SS105J
R 2110	(A,75,55)	RS1/16SS392J
R 2111	(A,74,57)	RS1/16SS123J

CAPACITORS

Circuit Symbol and No.		Part No.
C 1001	(A,6,6)	CKSRYB224K10
C 1004	(A,9,9)	CKSRYB102K50
C 1005	(A,4,9)	CKSRYB224K10
C 1006	(A,76,23)	CKSRYB104K25
C 1007	(A,79,26) 22 µF	CCG1178
C 1008	(A,84,32) 22 µF	CCG1178
C 1009	(A,83,40)	CCSSCH220J50
C 1010	(A,81,39)	CKSSYB102K50
C 1012	(A,79,24) 22 µF	CCG1178
C 1013	(A,84,30) 22 µF	CCG1178
C 1017	(A30.64)	CKSRYB105K10
C 1101	(A,29,83)	CSZSR220M16
C 1102	(A,59,91)	CSZSR101M6R3
C 1103	(A,56,93)	CKSSYB104K10
C 1104	(A,49,93)	CKSSYB103K16
C 1105	(A,59,97)	CSZSR101M6R3

Circuit Symbol and No.		Part No.
C 1106	(A,56,100)	CKSSYB104K10
C 1107	(A,49,98)	CKSSYB103K16
C 1108	(A,52,103)	CKSRYB104K25
C 1109	(A,56,104)	CKSSYB473K10
C 1110	(A,47,104)	CKSSYB473K10
C 1111	(A,41,88)	CKSSYB103K16
C 1112	(A,41,104)	CKSRYB105K10
C 1113	(A,40,104)	CKSRYB105K10
C 1114	(A,40,99)	CKSSYB103K16
C 1115	(A,35,83)	CSZSR220M16
C 1201	(A,33,79) 10 µF	CCG1138
C 1202	(A,29,78)	CKSRYB104K25
C 1203	(A,21,64)	CSZSR220M16
C 1204	(A,29,68)	CKSRYB104K25
C 1205	(A,16,67)	CKSRYB104K25
C 1206	(A,17,67)	CKSRYB104K25
C 1207	(A,24,64)	CSZSR220M16
C 1208	(A,17,80)	CKSRYB104K25
C 1240	(A,46,81)	CCSSCH470J50
C 1241	(A,45,81)	CCSSCH5R0C50
C 1243	(A,38,73) 10 µF	CCG1138
C 1244	(A,54,68)	CKSSYB472K25
C 1245	(A,47,68)	CKSSYB103K16
C 1501	(A,115,69)	CSZSR470M10
C 1502	(A,118,61)	CSZSR101M6R3
C 1503	(A,114,61)	CSZSR101M6R3
C 1504	(A,74,63)	CKSSYB104K10
C 1505	(A,76,63)	CKSSYB104K10
C 1506	(A,79,62)	CKSSYB104K10
C 1507	(A,79,63)	CKSSYB104K10
C 1508	(A,82,63)	CKSSYB104K10
C 1509	(A,85,63)	CKSSYB104K10
C 1510	(A,90,63)	CKSSYB104K10
C 1511	(A,96,63)	CKSSYB104K10
C 1512	(A,102,68)	CKSSYB104K10
C 1513	(A,103,73)	CKSSYB104K10
C 1514	(A,103,78)	CKSSYB104K10
C 1515	(A,103,80)	CKSSYB104K10
C 1516	(A,82,96)	CKSSYB104K10
C 1517	(A,78,96)	CKSSYB104K10
C 1518	(A,76,96)	CKSSYB104K10
C 1519	(A,76,97)	CKSSYB104K10
C 1520	(A,70,91)	CKSSYB104K10
C 1521	(A,70,89)	CKSSYB104K10
C 1522	(A,70,86)	CKSSYB104K10
C 1523	(A,70,85)	CKSSYB104K10
C 1524	(A,70,83)	CKSSYB104K10
C 1525	(A,70,81)	CKSSYB104K10
C 1526	(A,70,78)	CKSSYB104K10
C 1527	(A,70,75)	CKSSYB104K10
C 1528	(A,70,73)	CKSSYB104K10
C 1529	(A,70,71)	CKSSYB104K10
C 1530	(A,70,69)	CKSSYB104K10
C 1531	(A,98,63)	CKSSYB471K50
C 1532	(A,105,67)	CKSSYB103K16
C 1533	(A,105,65)	CKSSYB103K16
C 1552	(A,83,96)	CKSSYB104K10
C 1553	(A,90,102)	CKSRYB104K25
C 1554	(A,87,96)	CKSSYB104K10
C 1555	(A,87,98)	CKSRYB105K10

Circuit Symbol and No.			Part No.
C 1556	(A,100,101)		CSZSR470M10
C 1557	(A,89,96)		CKSSYB104K10
C 1558	(A,111,98)		CSZS4R7M16
C 1559	(A,84,100)		CKSRYB105K10
C 1570	(B,67,73)		CSZSR470M10
C 1571	(B,76,77)		CKSRYB474K10
C 1572	(B,76,85)		CKSRYB474K10
C 1573	(B,61,80)		CKSRYB474K10
C 1574	(B,61,83)		CKSRYB474K10
C 1575	(B,61,91)		CKSRYB474K10
C 1576	(B,61,94)		CKSRYB474K10
C 1577	(B,61,97)		CKSRYB474K10
C 1578	(B,76,98)		CKSRYB474K10
C 1579	(B,76,79)		CKSRYB474K10
C 1580	(B,76,82)		CKSRYB474K10
C 1581	(B,76,92)		CKSRYB474K10
C 1582	(B,76,95)		CKSRYB474K10
C 1583	(B,71,73)		CSZSR470M10
C 1601	(B,110,65)		CSZSR470M10
C 1603	(B,96,51)		CKSSYB104K10
C 1651	(B,121,33)		CSZSR470M10
C 1653	(B,108,20)		CKSSYB104K10
C 1654	(B,98,34)		CKSRYB104K25
C 1655	(B,108,34)		CKSSYB104K10
C 1671	(B,106,48)		CKSSYB104K10
C 1672	(B,110,48)		CKSSYB104K10
C 1673	(B,110,37)		CKSSYB104K10
C 1674	(B,106,37)		CKSSYB104K10
C 1675	(B,98,42)		CKSRYB104K25
C 1676	(B,118,39)		CKSYB106K6R3
C 1701	(A,106,67)		CKSRYB104K25
C 1702	(A,105,69)		CKSRYB104K25
C 1703	(A,90,96)		CKSSYB104K10
C 1704	(A,91,96)		CKSSYB103K16
C 1706	(A,92,96)		CKSSYB104K10
C 1707	(A,96,100)		CKSSYB104K10
C 1708	(A,95,100)		CKSSYB103K16
C 1709	(A,92,98)		CCSRCH221J50
C 1710	(A,97,98)		CKSSYB152K50
C 1711	(A,94,97)		CKSRYB105K10
C 1712	(A,96,97)		CKSRYB105K10
C 1713	(A,97,97)		CKSRYB105K10
C 1715	(A,104,89)		CKSSYB104K10
C 1716	(A,103,88)		CKSSYB104K10
C 1717	(A,104,88)		CKSSYB104K10
C 1718	(A,103,87)		CKSSYB104K10
C 1719	(A,104,87)		CKSSYB562K25
C 1720	(A,103,86)		CCSSCH101J50
C 1721	(A,104,86)		CCSSCH470J50
C 1722	(A,103,85)		CKSSYB103K16
C 1723	(A,104,85)		CKSSYB104K10
C 1724	(A,103,84)		CKSSYB104K10
C 1725	(A,104,84)		CKSSYB104K10
C 1726	(A,103,83)		CCSSCH330J50
C 1727	(A,104,83)		CKSSYB333K16
C 1728	(A,103,82)		CKSSYB104K10
C 1801	(B,31,96)		CKSSYB104K10
C 1802	(B,33,96)		CKSSYB104K10
C 1804	(B,34,87)		CKSSYB104K10
C 1809	(B,32,101)		CCSSCJ3R0C50

Circuit Symbol and No.			Part No.
C 1810	(B,36,101)		CCSSCK2R0C50
C 1811	(B,35,81)		CKSSYB104K10
C 1851	(B,21,87)		CKSSYB104K10
C 1852	(B,12,85)		CKSSYB104K10
C 1853	(B,10,85)		CKSYB106K6R3
C 1854	(B,23,84)		CKSYB106K6R3
C 1855	(B,21,84)		CKSRYB104K25
C 1856	(B,17,82)		CKSQYB225K10
C 1857	(B,10,80)		CCSRCH471J50
C 1858	(B,10,74)		CCSRCH471J50
C 1859	(B,10,81)		CCSRCH471J50
C 1860	(B,10,76)		CCSRCH471J50
C 1861	(B,17,77)		CKSQYB225K10
C 1862	(B,19,69)		CKSSYB471K50
C 1863	(B,11,71)		CKSSYB471K50
C 1864	(B,17,69)		CKSYB475K10
C 1865	(B,14,69)		CKSYB475K10
C 1870	(B,23,92)		CKSSYB102K50
C 1901	(A,19,46)		CKSRYB474K10
C 1902	(A,29,54)	22 μF/6.3 V	CCH1300
C 1903	(A,28,48)		CSZSC101M10
C 1910	(B,10,15)		CKSRYB102K50
C 2001	(A,120,30)		CKSYB106K6R3
C 2002	(A,114,48)		CKSRYB105K10
C 2003	(A,112,49)		CKSSYB103K16
C 2004	(A,110,48)		CKSSYB103K16
C 2005	(A,109,54)		CKSQYB475K10
C 2006	(A,103,54)		CKSSYB103K16
C 2007	(A,96,41)		CKSSYB104K10
C 2008	(A,111,29)		CKSSYB104K10
C 2009	(A,120,43)		CKSSYB473K10
C 2010	(A,118,43)		CKSSYB103K16
C 2011	(A,123,47)		CKSRYB105K10
C 2015	(A,120,44)		CKSSYB473K10
C 2016	(A,118,44)		CKSSYB103K16
C 2017	(A,103,55)		CKSSYB103K16
C 2018	(A,98,20)		CKSRYB104K25
C 2020	(A,105,50)		CKSSYB471K50
C 2021	(A,119,48)		CKSRYB104K25
C 2022	(B,122,30)		CKSRYB104K16

E

Unit Number : CWX2986
Unit Name : PCB Assy

MISCELLANEOUS

VR11	(A,8,10)	Semi-fixed 1 kΩ(B)	CCP1442
VR12	(A,9,23)	Semi-fixed 1 kΩ(B)	CCP1442
R 11	(A,8,15)		RS1/16S562J
R 12	(A,10,15)		RS1/16S472J
R 13	(A,8,18)		RS1/16S562J
R 14	(A,9,6)		RS1/16S562J

Miscellaneous Parts List

	Stage Assy(Service)	CXX2133
M 1	Cam Motor Assy(CAM)	CXC5908
M 2	Motor Unit(E/L Motor)	CXC5910
VR13	Variable Resistor 10 kΩ(B)	CCW1029

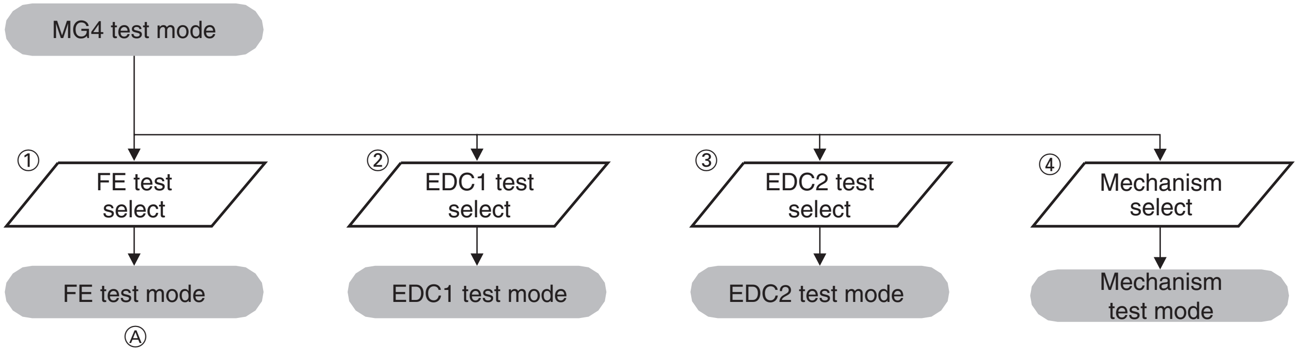
Circuit Symbol and No.		Part No.
M 10	Motor Unit	CZX5102
	Fan Motor	CXM1262
	LCD Module	CWX3263

6. ADJUSTMENT

6.1 DVD ADJUSTMENT

TEST MODE

[BAND] + [ENT] + Reset
DVD source ON



Note)When you turn off Acc in a static test mode,
please be sure to check that the mechanism has stopped.

Button	Application
"RIGHT"	Command for Test Mode: ①
"LEFT" of remote controller	Command for Test Mode: ②
"1" of remote controller	Command for Test Mode: ③
"2" of remote controller	Command for Test Mode: ④
"3" of remote controller	Command for Test Mode: ⑤
"4" of remote controller	Command for Test Mode: ⑥
"5" of remote controller	Command for Test Mode: ⑦
"6" of remote controller	Command for Test Mode: ⑧
"EJECT(1-6)"	Disc direct eject

The *EJECT key is displayed as the touch key by pressing OPEN key to shift to LOAD/EJECT screen. It is possible to eject by directly specifying the disc (other than the disc which is being clamped), however, it is possible to eject it only in the built-in DVD source. Furthermore, if you execute the current eject, the source is not turned OFF.

In the test mode, take care of the following.

- The information of each disc is not updated.

LOAD/EJECT screen, type of each media of source menu, existence of disc do not change if you execute eject or reload. Furthermore, the icon that shows the media of information plate maintains the content when it is reset.

If the mode is shifted to test mode when there is no disc, every 6 keys in source menu cannot be pressed, and it does not change if you insert the disk, so the MG4 can be turned ON only by the toggle by pressing source key.

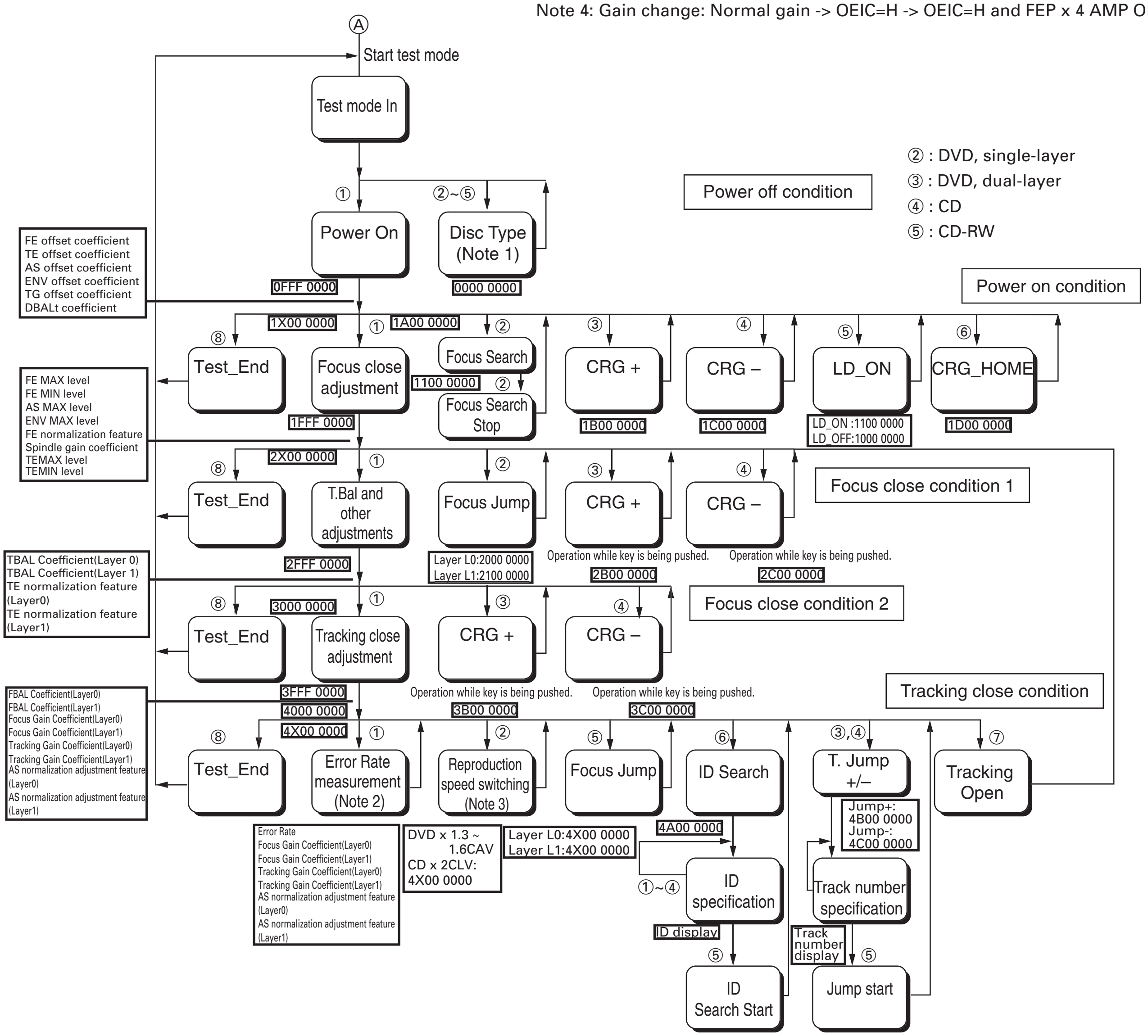
- The animation in LOAD/EJECT screen does not operate.

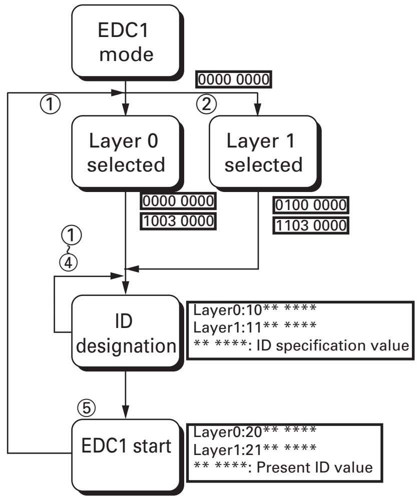
- When turning OFF the built-in DVD source, the mechanism is initialized and operates.

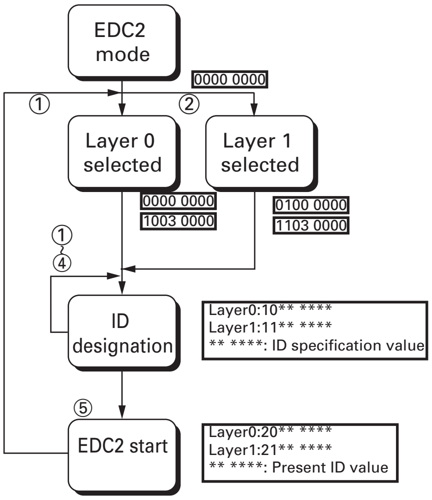
The test mode is released by AccOFF, however, as the MG4 implements the initialization, the operation does not return to the normal operation (as a product) till the operation is terminated.

● Front-End test mode flow chart

Note 1: At this stage select the media type. Various settings are carried out according to the media selection made here.
Note 2: While measurements are being taken, only the operation, for which the measurement is being taken, is allowed.
Note 3: Reproduction (play) speed is selectable from
DVD : x1.3 1.6CAV,CD : x 4CLV Fixation
Note 4: Gain change: Normal gain -> OEIC=H -> OEIC=H and FEP x 4 AMP ON


Ⓐ
Start test mode
Test mode In
①
②~⑤
Power On
Disc Type (Note 1)
Power off condition
② : DVD, single-layer
③ : DVD, dual-layer
④ : CD
⑤ : CD-RW
FE offset coefficient
TE offset coefficient
AS offset coefficient
ENV offset coefficient
TG offset coefficient
DBALt coefficient
0FFF 0000
0000 0000
Power on condition
1X00 0000
1A00 0000
⑧ ① ② ③ ④ ⑤ ⑥
Test_End
Focus close adjustment
Focus Search
1100 0000
Focus Search Stop
CRG +
CRG –
LD_ON
CRG_HOME
1FFF 0000
1B00 0000
1C00 0000
LD_ON :1100 0000
LD_OFF:1000 0000
1D00 0000
FE MAX level
FE MIN level
AS MAX level
ENV MAX level
FE normalization feature
Spindle gain coefficient
TEMAX level
TEMIN level
2X00 0000
Test_End
T.Bal and other adjustments
Focus Jump
CRG +
CRG –
Focus close condition 1
2FFF 0000
Layer L0:2000 0000
Layer L1:2100 0000
Operation while key is being pushed.
2B00 0000
Operation while key is being pushed.
2C00 0000
TBAL Coefficient(Layer 0)
TBAL Coefficient(Layer 1)
TE normalization feature (Layer0)
TE normalization feature (Layer1)
3000 0000
Focus close condition 2
Test_End
Tracking close adjustment
CRG +
CRG –
Operation while key is being pushed.
3B00 0000
Operation while key is being pushed.
3C00 0000
Tracking close condition
3FFF 0000
4000 0000
4X00 0000
FBAL Coefficient(Layer0)
FBAL Coefficient(Layer1)
Focus Gain Coefficient(Layer0)
Focus Gain Coefficient(Layer1)
Tracking Gain Coefficient(Layer0)
Tracking Gain Coefficient(Layer1)
AS normalization adjustment feature (Layer0)
AS normalization adjustment feature (Layer1)
⑧ ① ② ⑤ ⑥ ③,④ ⑦
Test_End
Error Rate measurement (Note 2)
Reproduction speed switching (Note 3)
Focus Jump
ID Search
T. Jump +/–
Tracking Open
Jump+: 4B00 0000
Jump-: 4C00 0000
Error Rate
Focus Gain Coefficient(Layer0)
Focus Gain Coefficient(Layer1)
Tracking Gain Coefficient(Layer0)
Tracking Gain Coefficient(Layer1)
AS normalization adjustment feature (Layer0)
AS normalization adjustment feature (Layer1)
DVD x 1.3 ~ 1.6CAV
CD x 2CLV:
4X00 0000
Layer L0:4X00 0000
Layer L1:4X00 0000
4A00 0000
①~④
ID specification
Track number specification
ID display
Track number display
⑤
ID Search Start
Jump start


EDC1 mode
0000 0000
①
②
Layer 0 selected
Layer 1 selected
0000 0000
1003 0000
0100 0000
1103 0000
①
~
④
ID designation
Layer0:10** ****
Layer1:11** ****
** ****: ID specification value
⑤
EDC1 start
Layer0:20** ****
Layer1:21** ****
** ****: Present ID value


EDC2 mode
0000 0000
①
②
Layer 0 selected
Layer 1 selected
0000 0000
1003 0000
0100 0000
1103 0000
①
~
④
ID designation
Layer0:10** ****
Layer1:11** ****
** ****: ID specification value
⑤
EDC2 start
Layer0:20** ****
Layer1:21** ****
** ****: Present ID value

F-close and F-search cannot be executed, unless LD-ON is set.
[If F-close isn't executed within 9 seconds after LD-ON, it switches to LD-OFF automatically.
And even if F-search is executed within 9 seconds after LD-ON, it also switches to LD-OFF.]
Please carry out F-close after carrying out power-off at once and carrying out power-on again, when carrying out F-close after performing F-search.

The track number designation is selected from the track numbers already prepared for selection.
Switching to cyclic operation is made at step ③, and the decision is finalized (entered) in step ④.

For CD: Tracks 1, 4, 10, 11 and 32.

For DVD: Tracks 1, 4, 10, 11, 32, 64 and 100.

Method for designating an ID address:

- A number of digits are determined through commands ① and ②. Numerical UP/DOWN operations are performed through commands ③ and ④. The decision is finalized (entered) with command ⑤.

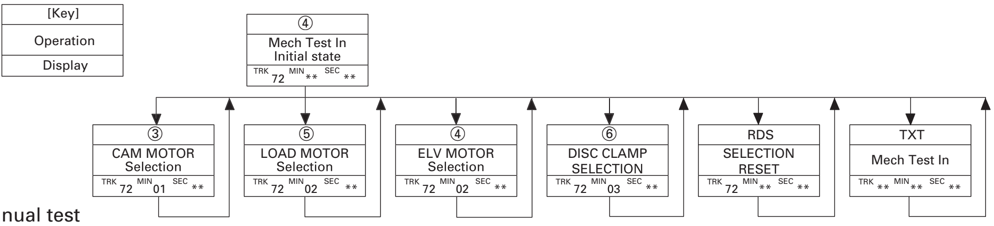
Display

Error Code List

Error status from DVD microcomputer	Contents	Display
0X50	Mecha. error	No display
0X40	No disc	No display
0X30	The temperature is abnormal	Thermal Protection in Motion
0X20	Read error	Error-02-XX
0XE2	Non-playable disc	NON-PLAYABLE DISC
0X90	Different region disc	DIFFERENT REGION DISC
0XFF	Undefined error	Error-FF

Error code of read error(Part of XX)

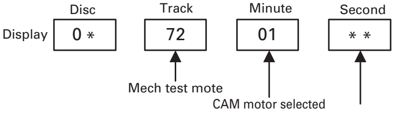
Error Code	Contents	Display
0X99	Data cannot read	Please confirm the disc
0X80	The address cannot be found	Please confirm the disc
0X90	Focus error	Please confirm the disc
0X91	Spindle lock NG	DVD is stopping because mechanism detected abnormality
0X92	Carriage home NG	DVD is stopping because mechanism detected abnormality
0X93	FOK error	Please confirm the disc
0X94	ID/Subcode cannot be read	Please confirm the disc
0X95	High spindle rotation	DVD is stopping because mechanism detected abnormality
0X96	Row spindle rotation	DVD is stopping because mechanism detected abnormality
0X98	TOC cannot be found	Please confirm the disc
0X9A	AV chip error	DVD is stopping because mechanism detected abnormality
0X9B	RecaveryNG(BE)	DVD is stopping because mechanism detected abnormality
0X9C	Play state error	
0X9D	Disc data error	
0X9E	Serface error (Disc distinction is improper)	

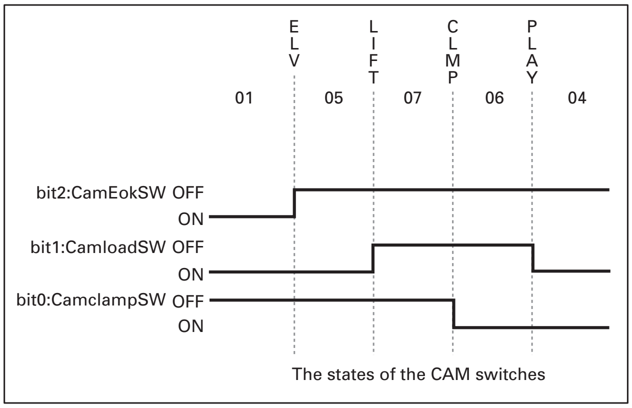

[Key]
Operation
Display
④ Mech Test In Initial state TRK 72 MIN ** SEC **
③ CAM MOTOR Selection TRK 72 MIN 01 SEC **
⑤ LOAD MOTOR Selection TRK 72 MIN 02 SEC **
④ ELV MOTOR Selection TRK 72 MIN 02 SEC **
⑥ DISC CLAMP SELECTION TRK 72 MIN 03 SEC **
RDS SELECTION RESET TRK 72 MIN ** SEC **
TXT Mech Test In TRK ** MIN ** SEC **

Manual test

Select the motor you desire to move by using one of the following four keys: ① and ②.
After selecting the motor, use the SEEK UP or SEEK DOWN key tomove the selected motor.
While the key is being pressed, the motor will keep moving.

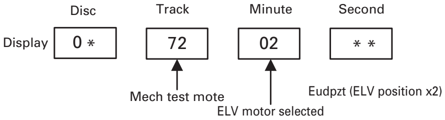
1. To select the CAM motor, press the ③key.


Disc
Track
Minute
Second
Display
0 *
72
01
* *
Mech test mote
CAM motor selected

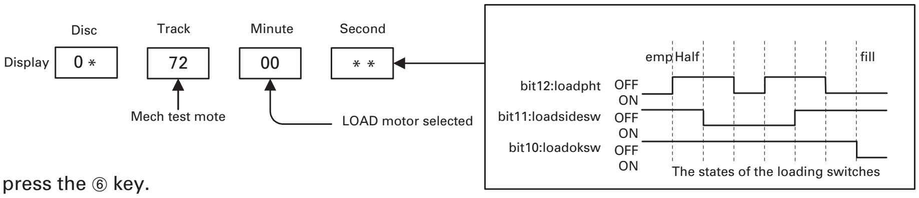


The states of the CAM switches

2. To select the ELV motor, press the ④ key.


Disc
Track
Minute
Second
Display
0 *
72
02
* *
Mech test mote
ELV motor selected
Eudpzt (ELV position x2)

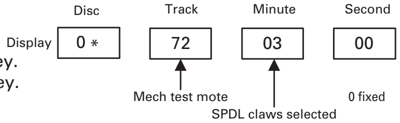
3. To select the LOAD motor, press the ⑤key. (Default)



The states of the loading switches

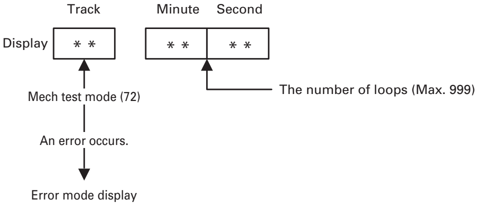
4. To select the SPDL claws, press the ⑥ key.
Caution: SPDL claw test should be performed in the servo test mode. The SPDL claws are controlled by the servo systems and the switches conditions cannot be checked in the mechanical test mode.

To open the claws, use the ① key.
To close the claws, use the ② key.


Disc
Track
Minute
Second
Display
0 *
72
03
00
Mech test mote
SPDL claws selected
0 fixed

Durability test

1. LOAD durability test (Load <-> Eject)
At the door open position (disc insertion/eject position), insert a disc and to durability test.


Track
Minute
Second
Display
* *
* *
* *
Mech test mode (72)
An error occurs.
Error mode display
The number of loops (Max. 999)

2. CAM durability test (Play <-> ELVOK)
At any position between CAM4P and CAM5P (display: 06, 04), to durability test.

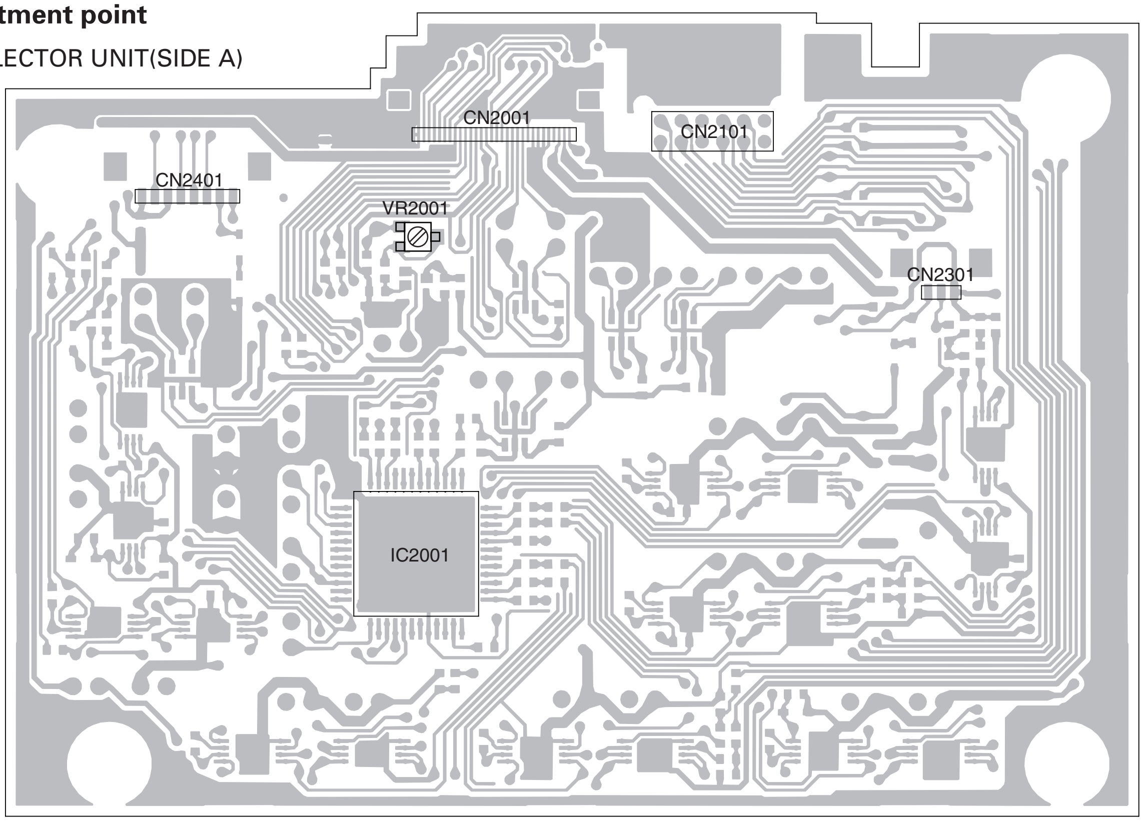
3. LIFT durability test (Current disc <-> Door Open)
At any position between CAM2P and CAM3P (display: 05, 07), to durability test.

4. ELV durability test (ELV1F <-> 6F)
At the CAM1P position (display: 01), to durability test.

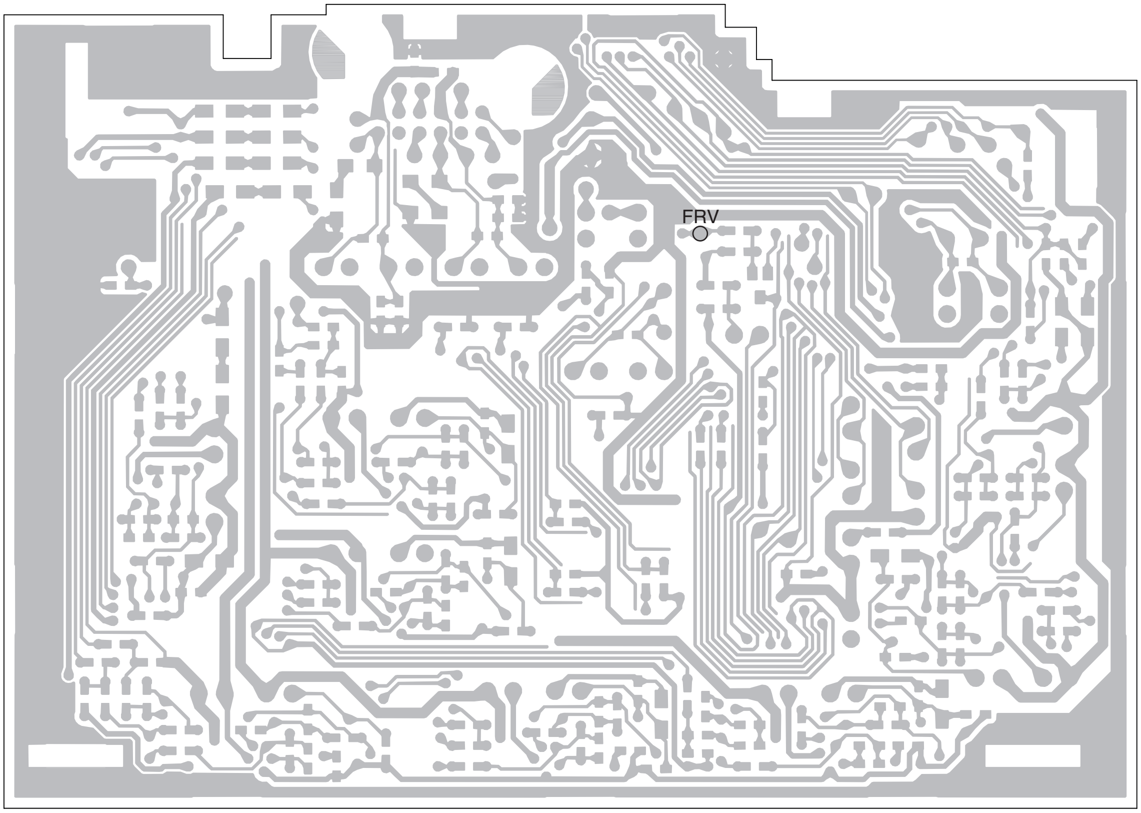
6.2 AV SELECTOR UNIT ADJUSTMENT

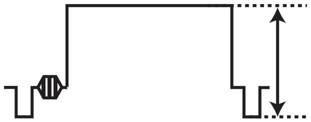
● Adjustment point

AV SELECTOR UNIT(SIDE A)


CN2001
CN2101
CN2401
VR2001
CN2301
IC2001

AV SELECTOR UNIT(SIDE B)

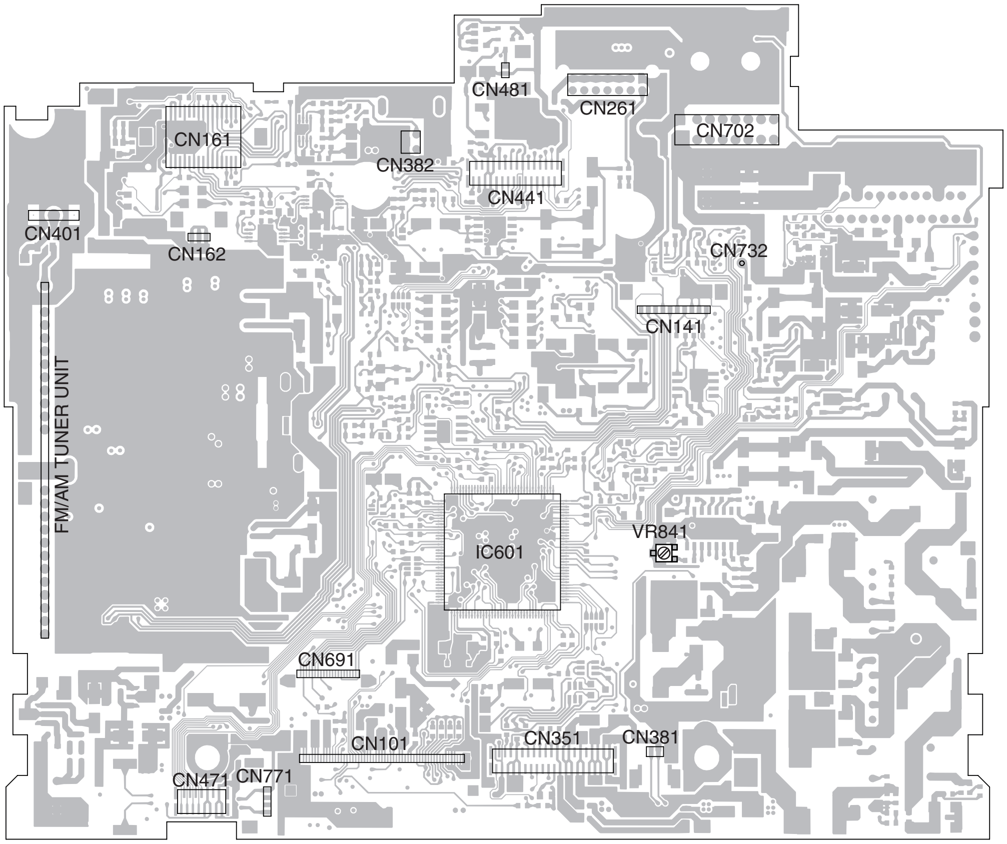


Step	Mother PCB adjustment	Mode	Input signal (input test pin,specs, other conditions)	Output signal (measuring point, waveform)	Measuring instruments	Specs	Adjusting point
1	Main video level	AV	Input test pin: V1····100 IRE (white 100%), 1.0 Vp-p, (input via 75 ohms) V1G····GND (VIDEO GND)	Measuring point: FRV 	Oscilloscope	1.35 V ± 0.05 Vp-p Measure between the sync tip and 100 IRE (top wave). Symptoms with poor adjustment. Over level : Luminance is too high. Under level : Luminance is too low.	VR2001

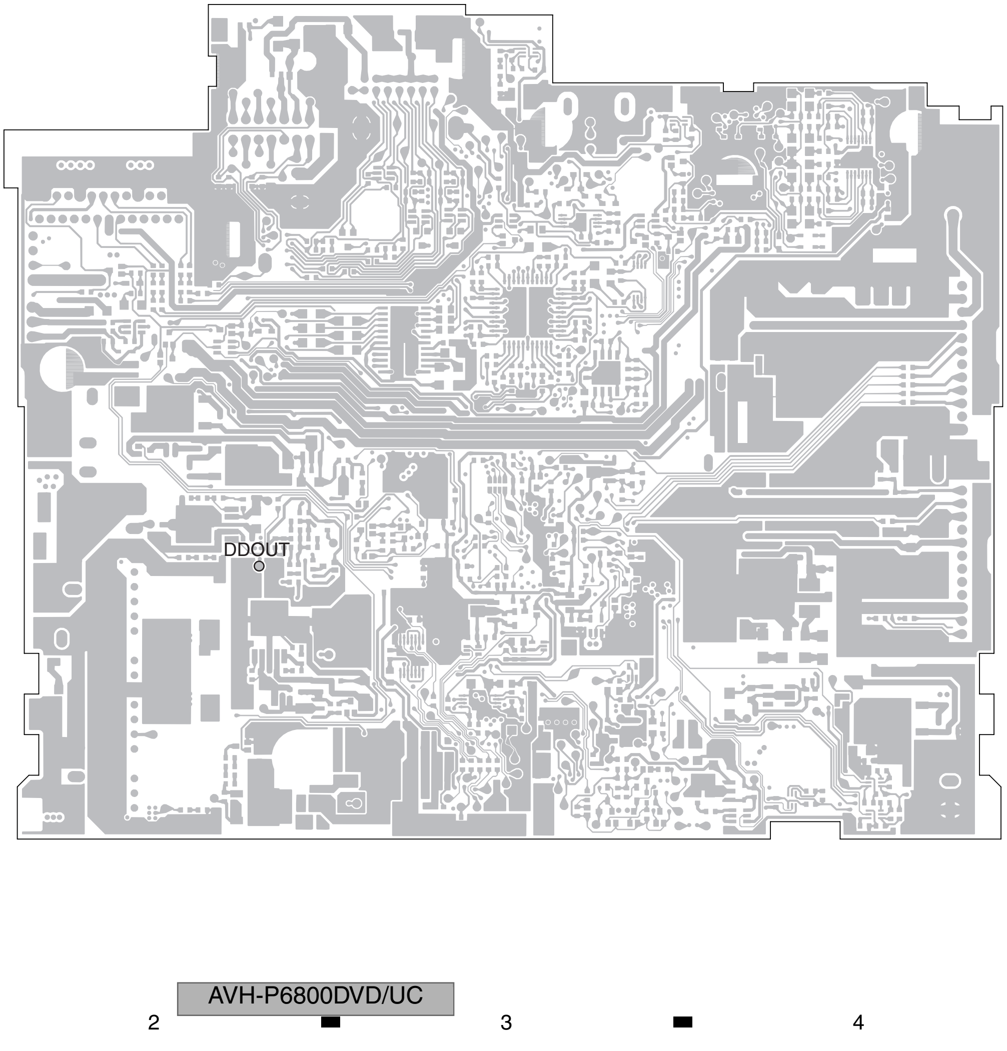
6.3 MOTHER PCB ADJUSTMENT

● Adjustment point

MOTHER PCB(SIDE A)


CN481
CN261
CN161
CN702
CN382
CN441
CN401
CN162
CN732
CN141
FM/AM TUNER UNIT
VR841
IC601
CN691
CN101
CN351
CN381
CN471
CN771

MOTHER PCB(SIDE B)

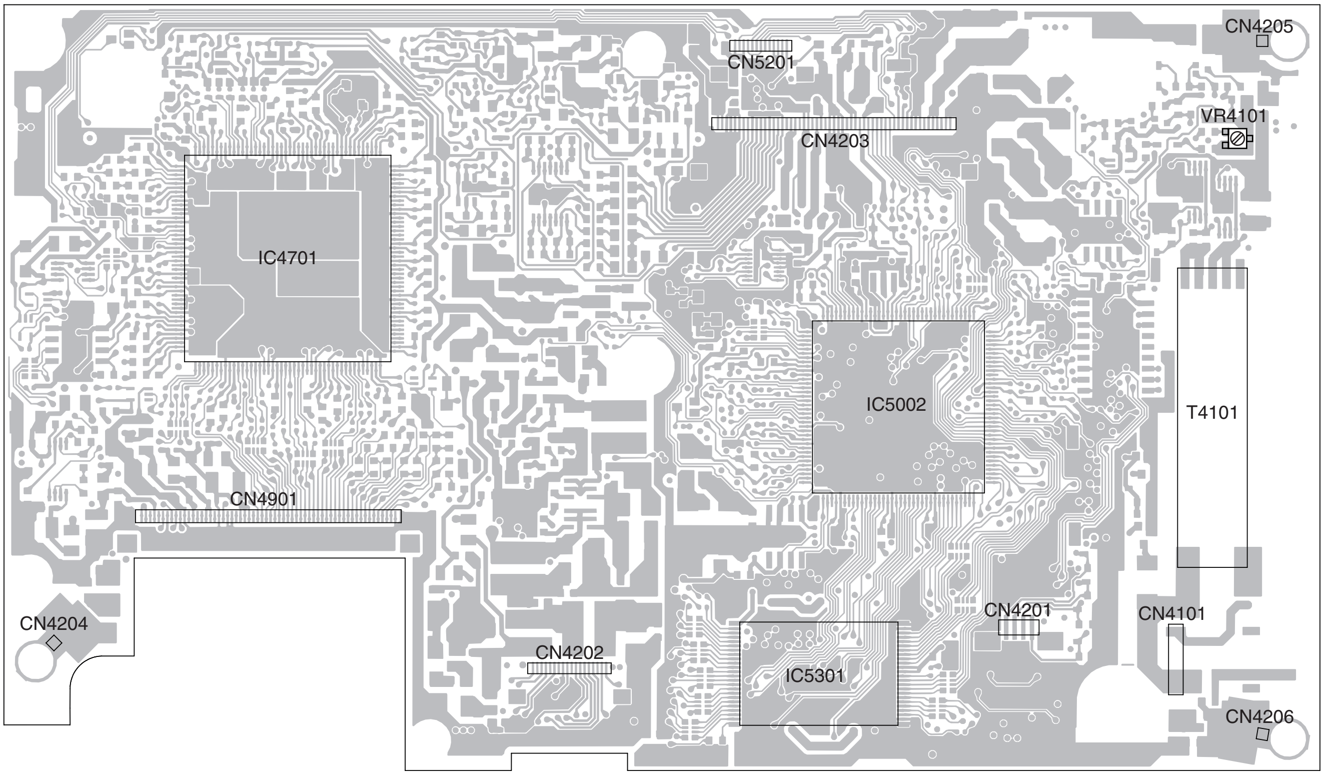


Step	Mother PCB adjustment	Mode	Input signal (input test pin,specs, other conditions)	Output signal (measuring point, waveform)	Measuring instruments	Specs	Adjusting point
1	Clock frequency Check		IC601 pin56(TESTIN) to 5 V	IC601 pin36(PCL)	Frequency Counter	18.874 368 MHz ± 754 Hz	
2	DC-DC converter frequency Adjustment		Connect 4 Ω between TP GD332 and GND.	Test point DDOUT	Frequency Counter	370 kHz ± 5 kHz	VR841

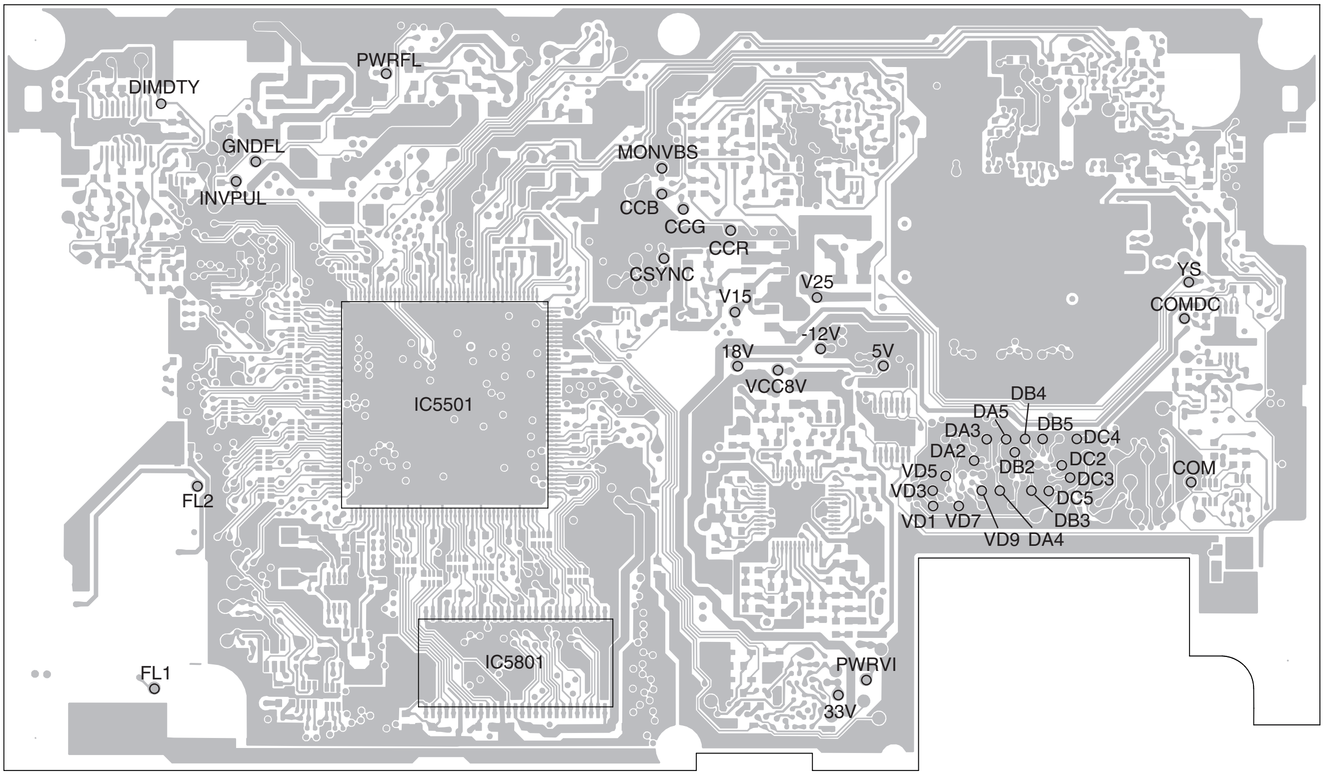
6.4 MONITOR PCB (INVERTER) ADJUSTMENT

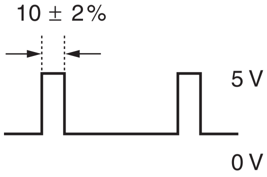
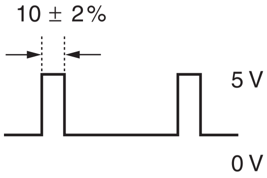
● Adjustment point

MONITOR PCB(SIDE A)


CN4205
CN5201
VR4101
CN4203
IC4701
IC5002
T4101
CN4901
CN4201
CN4101
CN4204
CN4202
IC5301
CN4206

MONITOR PCB(SIDE B)

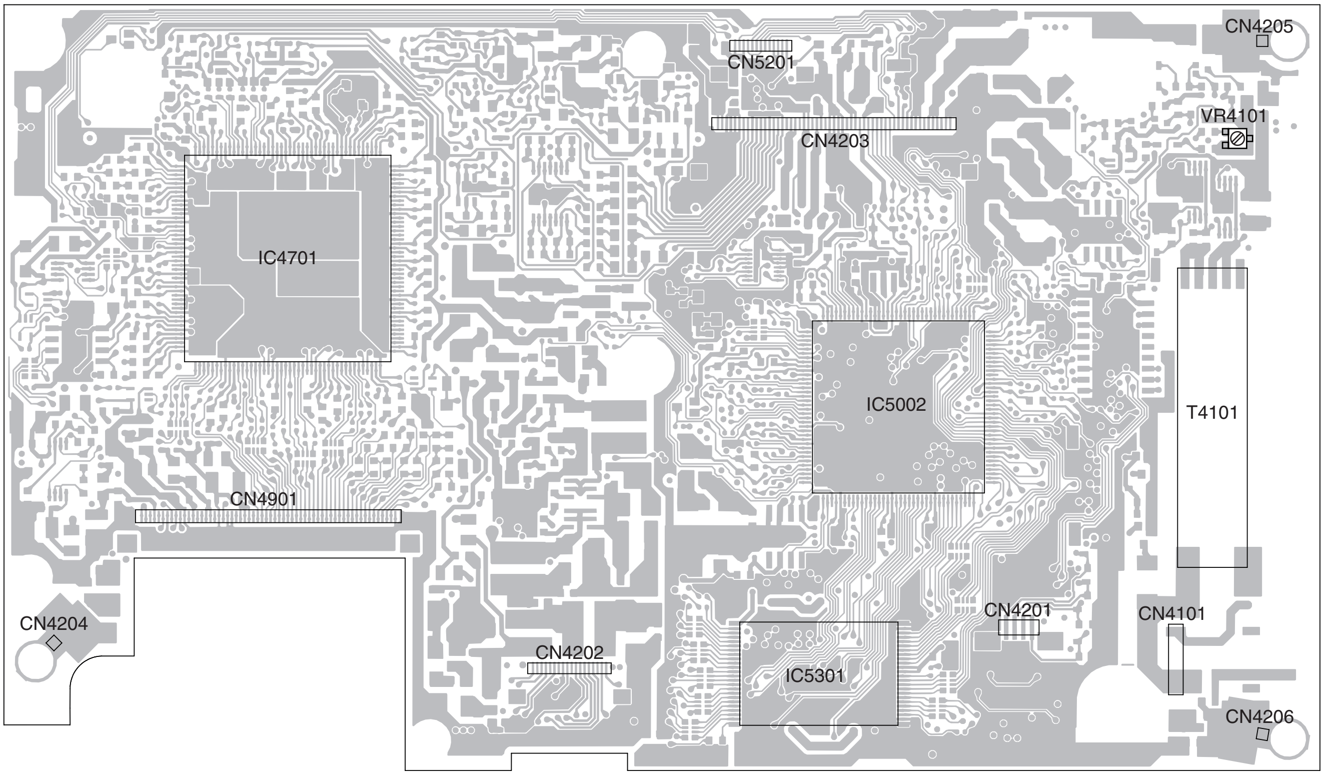

PWRFL
DIMDTY
GNDFL
INVPUL
MONVBS
CCB
CCG
CCR
CSYNC
V15
V25
YS
COMDC
-12V
18V
5V
VCC8V
IC5501
DB4
DA5
DB5
DA3
DC4
DA2
DC2
VD5
DB2
DC3
VD3
DC5
COM
VD1
VD7
DB3
VD9
DA4
FL2
IC5801
FL1
PWRVI
33V

No.	Adjustment item	Input signal	Measurement point	Adjustment point	Adjustment	Note
1	Basic drive Frequency adjustment	14.4 ± 0.2 V to TP PWRFL TP DIMDTY : GND TP GNDFL : GND TP INVPUL : GND	TP FL1 TP FL2	VR4101	48.0 ± 0.1 kHz	Connect 100 kΩ between TP FL1 and FL2. Monitor the waveform after voltage division or TP FL2. Do not monitor TP FL1 directly (measurement meter may be damaged because of high voltage).
2	Check frequency switching	Input 98.0 ± 1 kHz waveform below to TP INVPUL. 	TP FL1 TP FL2	—	49.0 ± 0.5 kHz	Verify that the frequency of waveform measured in No.1 is 49 kHz.
3	Check frequency switching	Input 104.0 ± 1 kHz waveform below to TP INVPUL. 	TP FL1 TP FL2	—	52.0 ± 0.5 kHz	Verify that the frequency of waveform measured in No.1 is 52 kHz.

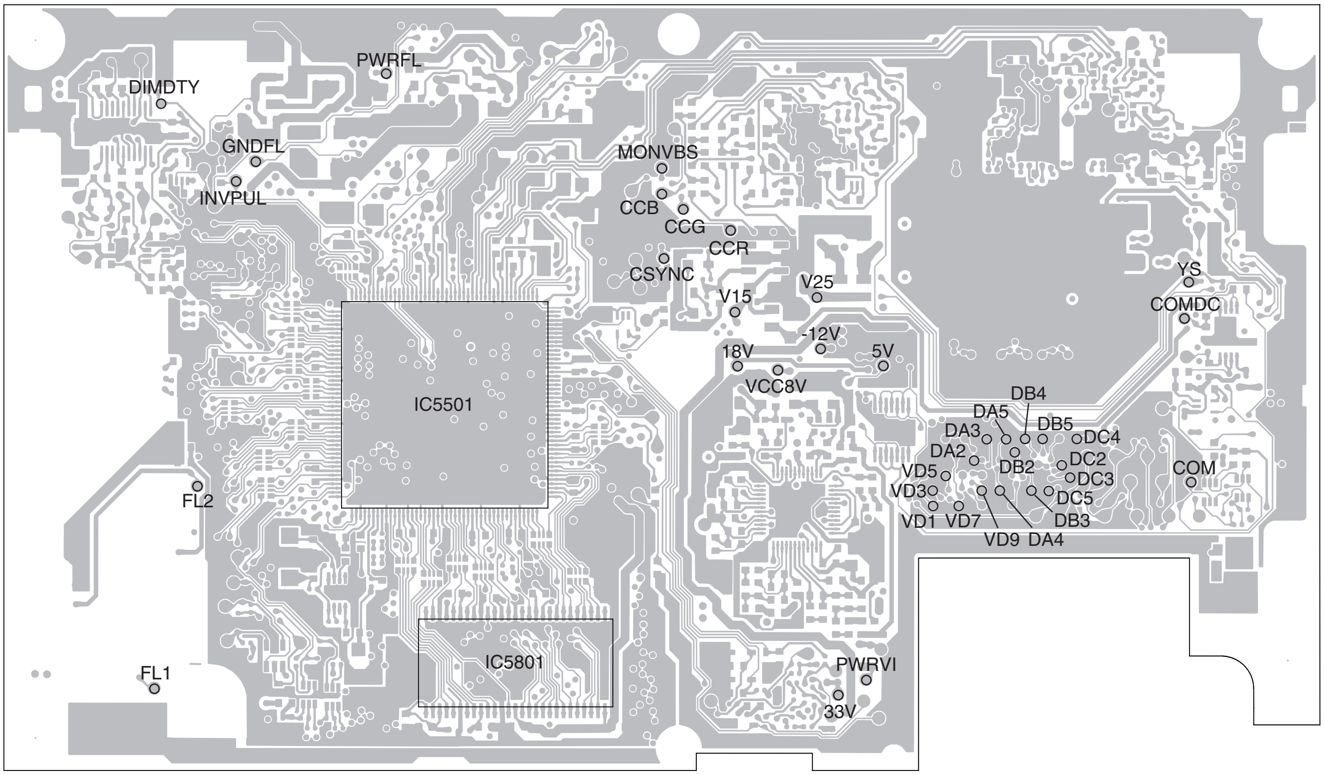
6.5 MONITOR PCB (MONITOR) ADJUSTMENT

● Adjustment point

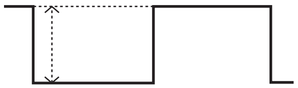
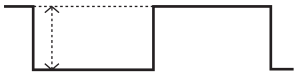
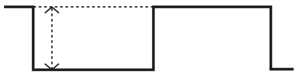
MONITOR PCB(SIDE A)

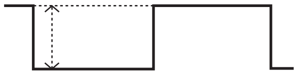
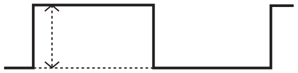
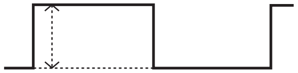
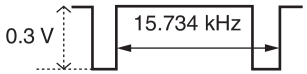
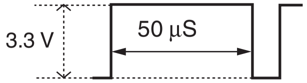
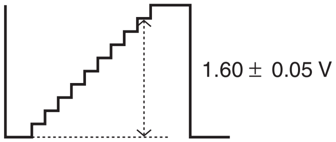
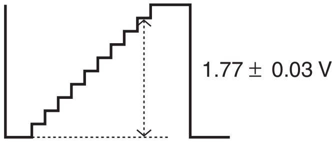

CN4205
CN5201
VR4101
CN4203
IC4701
IC5002
T4101
CN4901
CN4201
CN4101
CN4204
CN4202
IC5301
CN4206

MONITOR PCB(SIDE B)


PWRFL
DIMDTY
GNDFL
INVPUL
MONVBS
CCB
CCG
CCR
CSYNC
V25
V15
YS
COMDC
-12V
18V
5V
VCC8V
IC5501
DB4
DA5
DB5
DA3
DC4
DA2
DC2
DB2
COM
VD5
DC3
VD3
DC5
VD1
VD7
DB3
VD9
DA4
FL2
FL1
IC5801
PWRVI
33V

NOTE : When shutting off the power supply of TC90A96AFG-P, be careful not to energize each IC terminal. However, IIC lines (SDA and SCL) is not included in this case and it is possible to energize them with up to 5 V.

No.	Adjustment item	Input signal	Measurement point	Adjustment point	Adjustment	Note
1	Check 3.3 V power supply voltage	TP:PWRVI to 14.4 V	TP:33V	—	33V = 3.3 ± 0.25 V	
2	Check 2.5 V power supply voltage	TP:PWRVI to 14.4 V	TP:V25	—	V25 = 2.5 ± 0.15 V	
3	Check 1.5 V power supply voltage	TP:PWRVI to 14.4 V	TP:V15	—	V15 = 1.5 ± 0.08 V	
4	Check 5 V power supply voltage	TP:PWRVI to 14.4 V	TP:5V	—	5V = 4.9 ± 0.3 V	
5	Check 8 V power supply voltage	TP:PWRVI to 14.4 V	TP:VCC8V	—	VCC8V = 8.0 ± 0.5 V	
6	Check 18.5 V power supply voltage	TP:PWRVI to 14.4 V	TP:18V	—	18V = 18.5 ± 0.5 V	
7	Check -12 V power supply voltage	TP:PWRVI to 14.4 V	TP:-12V	—	-12V = -12.0 ± 0.6 V	
8	Vcom amplifier output amplitude check	No definition	TP:COM	—	4.70 ± 0.10 V 	Connect LCD panel for measurement
9	Tone voltage amplitude check V1	No definition	TP:VD1	—	4.20 ± 0.30 V 	Connect LCD panel for measurement
10	Tone voltage amplitude check V3	No definition	TP:VD3	—	1.75 ± 0.10 V 	Connect LCD panel for measurement

No.	Adjustment item	Input signal	Measurement point	Adjustment point	Adjustment	Note
11	Tone voltage amplitude adjustment V5	No definition	TP:VD5	—	0.35 ± 0.10 V 	Connect LCD panel for measurement
12	Tone voltage amplitude adjustment V7	No definition	TP:VD7	—	0.60 ± 0.10 V 	Connect LCD panel for measurement
13	Tone voltage amplitude adjustment V9	No definition	TP:VD9	—	3.30 ± 0.20 V 	Connect LCD panel for measurement
14	Preparation for image check	Input synchronized signal to TP CSYNC	—	—		Input 0.3 V (75 Ω)
15	Check RGB digital output	Input white 100% signal to TP CCR,CCG, CCB (0.70 Vpp ± 1%)	TP DA2 ~ DA5 TP DB2 ~ DB5 TP DC2 ~ DC5	—	Make sure that each output is “Hi” continuously during displaying image. 	When OSD is displayed in EEPROM adjustment mode, LOW output is mixed to the parts where there is a character.
16	Check RGB level	Input 10-step signal to TP CCR,CCG, CCB (0.70 Vpp ± 1%)	DAC output	—	The amplitude of the 9-step and the 0-step is 1.60 ± 0.05 V. 	
17	Composite level adjustment	Input composite image 10-step signal to TP MONVBS (1.35 Vpp ± 1%)	DAC output	Resistor setting of SA13h D5 ~ 0	The amplitude of the 9-step and the 0-step is 1.77 ± 0.03 V. 	

No.	Adjustment item	Input signal	Measurement point	Adjustment point	Adjustment	Note
18	YS performance check	Input signal to TP YS (0.4 V to 1.4 V (75 Ω))			Verify YS performs.	
19	YS, RGB sampling phase setting, check (GDC)	No definition	—	Register setting for SA2Dh D15 ~ 12 : YS D11 ~ 8 : B D7 ~ 4 : G D3 ~ 0 : R	(Line writing): 0010 (Service): [YS (R, G, B) SAMPL] should be 10 in EEPROM test mode	Check EEP-ROM setting value after writing.
20	YS, RGB sampling phase setting, check (NAVI, VDP)	No definition	—	Register setting for SA2Dh D15 ~ 12 : YS D11 ~ 8 : B D7 ~ 4 : G D3 ~ 0 : R	(Line writing): 1110 (Service): [YS (R, G, B) SAMPL] should be 6 in EEPROM test mode	Check EEP-ROM setting value after writing.
21	YS-OFFSET setting, check (GDC)	No definition	—	Register setting of SA2Fh D3 ~ 0	(Line writing): 0010 (Service): [YS DELAY] should be 10 in EEPROM test mode	Check EEP-ROM setting value after writing.
22	YS-OFFSET setting, check (NAVI, VDP)	No definition	—	Register setting of SA2Fh D3 ~ 0	(Line writing): 1110 (Service): [YS DELAY] should be 6 in EEPROM test mode	Check EEP-ROM setting value after writing.
23	Image check	Input composite image lamp signal (monochrome) to TP MONVBS	Screen	—	Make sure that tone changes smoothly, and there is no colored area in the entire display.	Execute to verify that IC4701 digital-out is not bridged or “OPEN”ed.
24	Aging	No definition	—	—	Leave for more than 30 minutes in operation mode.	Input white 100% signal
25	Flicker adjustment	Input black-white reverse signal per 1 line to TP CCR, CCG, CCB	Screen	TP COMDC DC output	Adjust the flicker level to minimum from all directions.	Black-white reverse signal can be the input to TP MONVBS (however, adjustment in RGB comes first). Brightness level of reverse signal should be 50%. Adjustment point can be COM DC of flicker adjustment mode.

SA✻✻h in this chart means the sub-address of TC90A96AFG-P.

● E2PROM Setting Mode

1. Start-up

- Reset and start-up the monitor microcomputer while EPRTEST terminal is in the Low.
- Press WIDE key + VOL- key together to Reset Start.

2. Operation

On each screen, operational guidance will be displayed. (In the case of a screen which has many display items, operational guidance will not be displayed.)

- Key operation
  BAND : Item selection
  TR± : page UP/DOWN or setting value UP/DOWN
  VOL± : Move to other item
  ENT : Switching of background

- Remote controller operation
  MENU ENT: Item selection
  ←→ : page UP/DOWN or setting value UP/DOWN
  ↑↓ : Move to other item

- Writing method
  * The preset value is written into E2PROM, then read out.
  At that time, if the written value and read value are different, it will be indicated in red.
  Writing and reading are performed in 16 bits. Number of bits for the value setting will be different depending on the item.

- CS (checksum)
  * When a value subject to CS (checksum) is changed, exclusive-OR in 8bit will be obtained and written in.
  This CS value, too, will be read out after written into E2PROM, and if the value written and the value read are different, it will be indicated in red.

3. Menu types for E2PROM adjustment mode

- E2PROM adjustment mode consists of the following menu.
  (By clicking each menu, you can read the explanation for each menu.)

E2PROM area selection (GDC/VDP/NAVI)
- TOP menu
  - Flicker adjustment menu
  - Line adjustment 1 menu
  - Line adjustment 2 menu
  - Line adjustment 3 menu
  - Line adjustment 4 menu
  - Line adjustment 5 menu
  - Line adjustment 6 menu
  - Line adjustment 7 menu
  - Line adjustment 8 menu
  - Line adjustment 9 menu
  - Parameter setting menu for dimmer

- At the time of mode IN, the TOP menu will be displayed first.
  It is designed in a way to select each adjustment menu on the TOP menu.

4. E2PROM area selection menu

[Content of selection]

Content		Adjustment range
Selection item	Displayed character string	
GDC AREA	GDC AREA	E2PROM area at the time of GDC sync.
VDP AREA	VDP AREA	E2PROM area at the time of VDP sync.
NAVI AREA	NAVI AREA	E2PROM area at the time of NAVI sync.

- This time, E2PROM has three areas.
  By switching the sync signal, the area used will be changed, and transmitted to the double window IC.
  (When the product power is turned ON.)

5. Memory item list and E2PROM

E2PROM memory alignment chart (S-93C66BD0I-J8)

	ADDRESS	Bit15	Bit14	Bit13	Bit12	Bit11	Bit10	Bit9	Bit8	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
RELATED DIMMER	00h	Outside light of dimmer adjustment coordinates (high)								Backlight of dimmer adjustment coordinates (high)							
	01h	Outside light of dimmer adjustment coordinates (middle)								Backlight of dimmer adjustment coordinates (middle)							
	02h	Outside light of dimmer adjustment coordinates (low)								Backlight of dimmer adjustment coordinates (low)							
	03h	Outside light threshold for dimmer (high)								Outside light threshold for dimmer (low)							
	04h	Maximum value of backlight output								Minimum value of backlight output							
	05h	Checksum EEPROM address:03h-04h															
RELATED PIP (including operation settings)	06h	Common reverse output DC center value								Common reverse output amplitude adjustment value							
	07h	Don't care		Brightness R						Don't care							
	08h	Don't care		Brightness G						Don't care							
	09h	Don't care		Brightness B						Don't care							
	0Ah	Don't care										Sub Y contrast					
	0Bh	Checksum EEPROM address:06h-0Ah															
RELATED PIP (including operation settings)	0Ch	RGB &YS horizontal positioning								Don't care							
	0Dh	YS sampling phase				Bch sampling phase				Gch sampling phase				Rch sampling phase			
	0Eh	Don't care												YS internal delay adjustment value			
	0Fh	Checksum EEPROM address:0Ch-0Eh															
	10h	Don't care										Main Y contrast					
	11h	Don't care		Main horizontal enhancer						Main vertical enhancer						Don't care	
				Gain		Limiter			fo	Gain		Replicate		Coring			
	12h	Don't care		Sub horizontal enhancer						Sub vertical enhancer						Don't care	
				Gain		Limiter			fo	Gain		Replicate		Coring			
	13h	γ setting ON/OFF	RGB simultaneous γslope A			R output DC offset				Don't care		RGB simultaneous γ1 inflection point					
	14h	RGB simultaneous γslope B			RGB simultaneous γ2 inflection point					RGB simultaneous γslope C			RGB simultaneous γ3 inflection point				
	15h	Don't care				G output DC offset				Don't care							
	16h	Don't care				B output DC offset				Don't care							
	17h	SA24h UPPER								SA24h LOWER							
	18h	SA25h UPPER								SA25h LOWER							
	19h	SA26h UPPER TV								SA26h LOWER TV							
	1Ah	SA26h UPPER								SA26h LOWER							
	1Bh	SA27h UPPER TV								SA27h LOWER TV							
	1Ch	SA27h UPPER								SA27h LOWER							
	1Dh	SA46h UPPER								SA46h LOWER							
	1Eh	SA47h UPPER								SA47h LOWER							
	1Fh	Dot search threshold								YS search threshold							
	20h	Phase search threshold								Xdisp (display difference permissible level)							
	21h	Don't care								YS disp (display difference permissible level)							
	22h	Checksum EEPROM address:10h-21h															
RELATED PIP (When factory is shipped)	23h	Don't care								Common reverse output DC center reference value							
	24h	RGB &YS horizontal positioning reference value								Don't care							
	25h	YS sampling phase reference value				Bch sampling phase reference value				Gch sampling phase reference value				Rch sampling phase reference value			
	26h	Don't care												YS internal delay adjustment reference value			
RELATED PIP (including operation settings)	27h	RGB &YS horizontal positioning								Don't care							
	28h	YS sampling phase				Bch sampling phase				Gch sampling phase				Rch sampling phase			
	29h	Don't care												YS internal delay adjustment value			
	2AH	Checksum EEPROM address:23h-29h															
	2Bh	Don't care										Main Y contrast					
	2Ch	Don't care		Main horizontal enhancer						Main vertical enhancer						Don't care	
				Gain		Limiter			fo	Gain		Replicate		Coring			
	2Dh	Don't care		Sub horizontal enhancer						Sub vertical enhancer						Don't care	
				Gain		Limiter			fo	Gain		Replicate		Coring			
	2Eh	γ setting ON/OFF	RGB simultaneous γslope A			R output DC offset				Don't care		RGB simultaneous γ1 inflection point					
	2Fh	RGB simultaneous γslope B			RGB simultaneous γ2 inflection point					RGB simultaneous γslope C			RGB simultaneous γ3 inflection point				
	30h	Don't care				G output DC offset				Don't care							
	31h	Don't care				B output DC offset				Don't care							

<table>
<tr><th></th><th>ADDRESS</th><th>Bit15</th><th>Bit14</th><th>Bit13</th><th>Bit12</th><th>Bit11</th><th>Bit10</th><th>Bit9</th><th>Bit8</th><th>Bit7</th><th>Bit6</th><th>Bit5</th><th>Bit4</th><th>Bit3</th><th>Bit2</th><th>Bit1</th><th>Bit0</th></tr>
<tr><td rowspan="12"></td><td>32h</td><td colspan="8">SA24h UPPER</td><td colspan="8">SA24h LOWER</td></tr>
<tr><td>33h</td><td colspan="8">SA25h UPPER</td><td colspan="8">SA25h LOWER</td></tr>
<tr><td>34h</td><td colspan="8">SA26h UPPER TV</td><td colspan="8">SA26h LOWER TV</td></tr>
<tr><td>35h</td><td colspan="8">SA26h UPPER</td><td colspan="8">SA26h LOWER</td></tr>
<tr><td>36h</td><td colspan="8">SA27h UPPER TV</td><td colspan="8">SA27h LOWER TV</td></tr>
<tr><td>37h</td><td colspan="8">SA27h UPPER</td><td colspan="8">SA27h LOWER</td></tr>
<tr><td>38h</td><td colspan="8">SA46h UPPER</td><td colspan="8">SA46h LOWER</td></tr>
<tr><td>39h</td><td colspan="8">SA47h UPPER</td><td colspan="8">SA47h LOWER</td></tr>
<tr><td>3Ah</td><td colspan="8">Dot search threshold</td><td colspan="8">YS search threshold</td></tr>
<tr><td>3Bh</td><td colspan="8">Phase search threshold</td><td colspan="8">Xdisp (display difference permissible level)</td></tr>
<tr><td>3Ch</td><td colspan="8">Don't care</td><td colspan="8">YS disp (display difference permissible level)</td></tr>
<tr><td>3Dh</td><td colspan="16">Checksum
EEPROM address:2Bh-3Ch</td></tr>
<tr><td rowspan="4">RELATED PIP (When factory is shipped)</td><td>3Eh</td><td colspan="8">Don't care</td><td colspan="8">Common reverse output DC center reference value</td></tr>
<tr><td>3Fh</td><td colspan="8">RGB &YS horizontal positioning reference value</td><td colspan="8">Don't care</td></tr>
<tr><td>40h</td><td colspan="4">YS sampling phase reference value</td><td colspan="4">Bch sampling phase reference value</td><td colspan="4">Gch sampling phase reference value</td><td colspan="4">Rch sampling phase reference value</td></tr>
<tr><td>41h</td><td colspan="8">Don't care</td><td colspan="4"></td><td colspan="4">YS internal delay adjustment reference value</td></tr>
<tr><td rowspan="4">RELATED PIP (including operation settings)</td><td>42h</td><td colspan="8">RGB &YS horizontal positioning</td><td colspan="8">Don't care</td></tr>
<tr><td>43h</td><td colspan="4">YS sampling phase</td><td colspan="4">Bch sampling phase</td><td colspan="4">Gch sampling phase</td><td colspan="4">Rch sampling phase</td></tr>
<tr><td>44h</td><td colspan="12">Don't care</td><td colspan="4">YS internal delay adjustment value</td></tr>
<tr><td>45h</td><td colspan="16">Checksum
EEPROM address:3Eh-44h</td></tr>
<tr><td rowspan="21"></td><td>46h</td><td colspan="10">Don't care</td><td colspan="6">Main Y contrast</td></tr>
<tr><td rowspan="2">47h</td><td colspan="2" rowspan="2">Don't care</td><td colspan="6">Main horizontal enhancer</td><td colspan="6">Main vertical enhancer</td><td colspan="2" rowspan="2">Don't care</td></tr>
<tr><td colspan="2">Gain</td><td colspan="2">Limiter</td><td></td><td>fo</td><td colspan="2">Gain</td><td colspan="2">Replicate</td><td colspan="2">Coring</td></tr>
<tr><td rowspan="2">48h</td><td colspan="2" rowspan="2">Don't care</td><td colspan="6">Sub horizontal enhancer</td><td colspan="6">Sub vertical enhancer</td><td colspan="2" rowspan="2">Don't care</td></tr>
<tr><td colspan="2">Gain</td><td colspan="2">Limiter</td><td></td><td>fo</td><td colspan="2">Gain</td><td colspan="2">Replicate</td><td colspan="2">Coring</td></tr>
<tr><td>49h</td><td>γ setting ON/OFF</td><td colspan="3">RGB simultaneous γslope A</td><td colspan="4">R output DC offset</td><td colspan="2">Don't care</td><td colspan="6">RGB simultaneous γ1 inflection point</td></tr>
<tr><td>4Ah</td><td colspan="3">RGB simultaneous γslope B</td><td colspan="5">RGB simultaneous γ2 inflection point</td><td colspan="3">RGB simultaneous γslope C</td><td colspan="5">RGB simultaneous γ3 inflection point</td></tr>
<tr><td>4Bh</td><td colspan="4">Don't care</td><td colspan="4">G output DC offset</td><td colspan="8">Don't care</td></tr>
<tr><td>4Ch</td><td colspan="4">Don't care</td><td colspan="4">B output DC offset</td><td colspan="8">Don't care</td></tr>
<tr><td>4Dh</td><td colspan="8">SA24h UPPER</td><td colspan="8">SA24h LOWER</td></tr>
<tr><td>4Eh</td><td colspan="8">SA25h UPPER</td><td colspan="8">SA25h LOWER</td></tr>
<tr><td>4Fh</td><td colspan="8">SA26h UPPER TV</td><td colspan="8">SA26h LOWER TV</td></tr>
<tr><td>50h</td><td colspan="8">SA26h UPPER</td><td colspan="8">SA26h LOWER</td></tr>
<tr><td>51h</td><td colspan="8">SA27h UPPER TV</td><td colspan="8">SA27h LOWER TV</td></tr>
<tr><td>52h</td><td colspan="8">SA27h UPPER</td><td colspan="8">SA27h LOWER</td></tr>
<tr><td>53h</td><td colspan="8">SA46h UPPER</td><td colspan="8">SA46h LOWER</td></tr>
<tr><td>54h</td><td colspan="8">SA47h UPPER</td><td colspan="8">SA47h LOWER</td></tr>
<tr><td>55h</td><td colspan="8">Dot search threshold</td><td colspan="8">YS search threshold</td></tr>
<tr><td>56h</td><td colspan="8">Phase search threshold</td><td colspan="8">Xdisp (display difference permissible level)</td></tr>
<tr><td>57h</td><td colspan="8">Don't care</td><td colspan="8">Gch sampling phase reference value</td></tr>
<tr><td>58h</td><td colspan="16">Checksum
EEPROM address:46h-57h</td></tr>
<tr><td rowspan="4">RELATED PIP (When factory is shipped)</td><td>59h</td><td colspan="8">Don't care</td><td colspan="8">Common reverse output DC center reference value</td></tr>
<tr><td>5Ah</td><td colspan="8">RGB &YS horizontal positioning reference value</td><td colspan="8">Don't care</td></tr>
<tr><td>5Bh</td><td colspan="4">YS sampling phase reference value</td><td colspan="4">Bch sampling phase reference value</td><td colspan="4">Gch sampling phase reference value</td><td colspan="4">Rch sampling phase reference value</td></tr>
<tr><td>5Ch</td><td colspan="12">Don't care</td><td colspan="4">YS internal delay adjustment reference value</td></tr>
<tr><td rowspan="9">RELATED TOUCH PANEL (When factory is shipped)</td><td>5Dh</td><td colspan="8">Touch panel X coordinate 1</td><td colspan="8">Touch panel Y coordinate 1</td></tr>
<tr><td>5Eh</td><td colspan="8">Touch panel X coordinate 2</td><td colspan="8">Touch panel Y coordinate 2</td></tr>
<tr><td>5Fh</td><td colspan="8">Touch panel X coordinate 3</td><td colspan="8">Touch panel Y coordinate 3</td></tr>
<tr><td>60h</td><td colspan="8">Touch panel X coordinate 4</td><td colspan="8">Touch panel Y coordinate 4</td></tr>
<tr><td>61h</td><td colspan="8">Touch panel X coordinate 5</td><td colspan="8">Touch panel Y coordinate 5</td></tr>
<tr><td>62h</td><td colspan="8">Touch panel X coordinate 6</td><td colspan="8">Touch panel Y coordinate 6</td></tr>
<tr><td>63h</td><td colspan="8">Touch panel X coordinate 7</td><td colspan="8">Touch panel Y coordinate 7</td></tr>
<tr><td>64h</td><td colspan="8">Touch panel X coordinate 8</td><td colspan="8">Touch panel Y coordinate 8</td></tr>
<tr><td>65h</td><td colspan="8">Touch panel X coordinate 9</td><td colspan="8">Touch panel Y coordinate 9</td></tr>
</table>

	ADDRESS	Bit15	Bit14	Bit13	Bit12	Bit11	Bit10	Bit9	Bit8	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
	66h	Touch panel X coordinate 10								Touch panel Y coordinate 10							
	67h	Touch panel X coordinate 11								Touch panel Y coordinate 11							
	68h	Touch panel X coordinate 12								Touch panel Y coordinate 12							
	69h	Touch panel X coordinate 13								Touch panel Y coordinate 13							
	6Ah	Touch panel X coordinate 14								Touch panel Y coordinate 14							
	6Bh	Touch panel X coordinate 15								Touch panel Y coordinate 15							
	6Ch	Touch panel X coordinate 16								Touch panel Y coordinate 16							
	6Dh	Outermost circumference X min								Outermost circumference Y min							
	6Eh	Outermost circumference X max								Outermost circumference Y max							
	6Fh	Touch panel calibration adjustment result								Touch panel outermost circumference adjustment result							
	70h	TOUCH VD X								TOUCH VD Y							
	71h	Checksum EEPROM address:59h-70h															
RELATED TOUCH PANEL	72h	Touch panel X coordinate 1								Touch panel Y coordinate 1							
	73h	Touch panel X coordinate 2								Touch panel Y coordinate 2							
	74h	Touch panel X coordinate 3								Touch panel Y coordinate 3							
	75h	Touch panel X coordinate 4								Touch panel Y coordinate 4							
	76h	Touch panel X coordinate 5								Touch panel Y coordinate 5							
	77h	Touch panel X coordinate 6								Touch panel Y coordinate 6							
	78h	Touch panel X coordinate 7								Touch panel Y coordinate 7							
	79h	Touch panel X coordinate 8								Touch panel Y coordinate 8							
	7Ah	Touch panel X coordinate 9								Touch panel Y coordinate 9							
	7Bh	Touch panel X coordinate 10								Touch panel Y coordinate 10							
	7Ch	Touch panel X coordinate 11								Touch panel Y coordinate 11							
	7Dh	Touch panel X coordinate 12								Touch panel Y coordinate 12							
	7Eh	Touch panel X coordinate 13								Touch panel Y coordinate 13							
	7Fh	Touch panel X coordinate 14								Touch panel Y coordinate 14							
	80h	Touch panel X coordinate 15								Touch panel Y coordinate 15							
	81h	Touch panel X coordinate 16								Touch panel Y coordinate 16							
	82h	Outermost circumference X min								Outermost circumference Y min							
	83h	Outermost circumference X max								Outermost circumference Y max							
	84h	Touch panel calibration adjustment result								Touch panel outermost circumference adjustment result							
	85h	TOUCH VD X								TOUCH VD X							
	86h	Checksum EEPROM address:72h-85h															
Others	87h	The area for the checker test by the manufacturing engineering								Switching between NAVI and VDP use							
	88h	EJECT lock value								NAVI CSYNC synchronous mode state value (not used)							
	89h	Don't care															
	-	Don't care															
	FFh	Don't care															

* The arrangement of DIMMER, PIP, touch panel and the others were determined by the frequency of usage.

* At the time of writing error or data check (checksum, large or small relationship etc.) error, initialization will be made using the value held by the software, but the area for initialization is by each divided section as listed above.
In the case of DIMMER, however, initialization is made in smaller division such as the addresses 00H~02H and 03H~04H.

* As for the DIMMER related section, the area changed by the user operation (address 00H~02H) will not be subject to the checksum calculation.

* As for the PIP related section, the data obtained from PIP can be stored in the E2PROM without modifying by the software in view of the PIP register structure. Furthermore, the arrangement is such that the data obtained from the E2PROM can be transmitted to the PIP without modification. (Similar to NN629.) Incidentally, areas are divided based on the fact whether changes are made during normal operation or not. (Checksum area is provided for each.)

* As for the factory preset value (reference value) for the addresses 2AH~2DH, they are not subject to checksum calculation in order to maintain the factory preset value, and they are basically READ ONLY value without initialization.

* At the time of E2PROM reset, the above addresses (2AH~2DH excepted) are initialized using the value held in the software.

* The area for the checker test by the manufacturing engineering for the higher byte of the address 42H is the area used at the time of E2PROM connection verification during manufacturing engineering test mode (test over communication mode).

Make change to be used as the NAVI CSYNC synchronous mode state value area.
NAVI CSYNC synchronous mode state value 0 → NAVI CSYNC synchronous 6 m mode
NAVI CSYNC synchronous mode state value 1 → NAVI CSYNC synchronous normal mode

6. Screen specification of each mode

Actual OSD screen samples are showed inside of the thick frame in the chart below.
The numbers in the chart are the changed parts during adjustment in each screen (maximum value is showed in the sample).
The items are for design review and line adjustment.

■ Flicker adjustment mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Common reverse output center value	[0-255]	COM DC	85		

✻ ■ Note1 : The contents of [COM DC, clock phase] should be reflected to the reverse output center reference value.

■ Line adjustment 1 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Bright	[0-255]	COM DC	150		
RGB simultaneous contrast (SA0C [D0-7])	[0-255]	CONTRAST	168		
Common reverse output amplitude adjustment value	[0-255]	COM AMP AJ	150		
R output DC offset (SA1A [D11-8])	[0-15]	ROUT BIAS	8		
G output DC offset (SA1C[D11-8])	[0-15]	GOUT BIAS	8		
B output DC offset (SA1E[D11-8])	[0-15]	BOUT BIAS	8		
Main Y contrast (SA0F[D5-0])	[0-63]	RGB CNTRST	28		
Sub Y contrast (SA13[D5-0])	[0-63]	CMP CNTRST	25		

- BRIGHT value is determined by the image quality setting table based on the user setting step and the common inverted output amplitude adjustment value (COM AMPAJ).
  The output of the monitor microcomputer terminal [DACDI] (Pin 107 in the case of AVH-P68xxDVD.) is controlled by this brightness value.
  Supplemental explanation 1) It should be noted that, even of the BRIGHT value is changed in the test mode, it will not be reflected in the user setting step value.
  Supplemental explanation 2) In the test mode during monitor stand-alone operation, the user setting step is not reflected in the calculation of the BRIGHT value.

Note 1… "Black density (=BRIGHT)" adjustment by the user is done only by controlling the common inverted output amplification and it does not use the brightness of the double window IC.
Note 2… The content of BRIGHT and the RGB simultaneous contrast are the reference value (adjustable though) when adjusting other items and they will not be stored in the E2PROM.
Note 3… It should be noted that the content of R(G/B) output DC offset, main Y contrast and sub Y contrast will be different between the ones displayed (E2PROM written value) and the ones set in the register of double window IC. (Because the relationship between the double window IC register value and the screen output value is not linear, conversion by software is necessary.)

[R, G, BOUT BIAS]

Indicated value (=adjustment value) (DEC)	EEPROM written value (DEC)	Registered value of 2- display IC (BIN)	
15	15	0111	(MAX)
14	14	0110	
:	:	:	
9	9	0001	
8	8	0000	(TYP)
7	7	1111	
:	:	:	
1	1	1001	
0	0	1000	(MIN)

[RGB, CMP, CNTRST]

Indicated value (=adjustment value) (DEC)	EEPROM written value (DEC)	Registered value of 2- display IC (BIN)	
63	63	011111	(MAX)
62	62	011110	
:	:	:	
33	33	000001	
32	32	000000	(TYP)
31	31	111111	
:	:	:	
1	1	100001	
0	0	100000	(MIN)

■ Line adjustment 2 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
RGB & YS horizontal alignment (SA2B [D15-8])	[0-255]	DOT H POSIT	69		
YS sampling phase 1 (SA2D [D15-12])	[0-15]	YS SAMPL	10		
AD sampling phase B (SA2D [D11-8])	[0-15]	B SAMPL	10		
AD sampling phase G (SA2D [D7-4])	[0-15]	G SAMPL	10		
AD sampling phase R (SA2D [D3-0])	[0-15]	R SAMPL	10		
YS internal delay adjustment phase (SA2F [D3-0])	[0-15]	YS DELAY	10		

Note 1… It should be noted that the displayed value (E2PROM written value) and the double window IC register value are different for the following items.
(Because the relationship between the double window IC register value and the screen output value is not linear, conversion by software is necessary.)

YS sampling phase 1
AD sampling phase B
AD sampling phase G
AD sampling phase R
YS internal delay adjustment

Indicated value (=adjustment value) (DEC)	EEPROM written value (DEC)	Registered value of 2- display IC (BIN)	
15	15	0111	(MAX)
14	14	0110	
:	:	:	
9	9	0001	
8	8	0000	(TYP)
7	7	1111	
:	:	:	
1	1	1001	
0	0	1000	(MIN)

■Line adjustment 3 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Dot search threshold	[0-255]	TH DOT	112		
YS search threshold	[0-4]	TH YS	3		
Phase search threshold	[0-255]	TH PHASE	112		
Xdisp	[0-63]	X DISP	32		
Ydisp	[0-4]	YS DISP	2		

■Line adjustment 4 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Main horizontal enhancer gain (SA10 [D13-12])	[0-3]	M H GAIN	0		
Main horizontal enhancer limiter (SA10 [D11-10])	[0-3]	M H LIMIT	0		
Main horizontal enhancer f0 (SA10 [D8])	[0-1]	M H F0	0		
Main vertical enhancer gain (SA10 [D7-6])	[0-3]	M V GAIN	0		
Main vertical enhancer replicable (SA10 [D5-4])	[0-3]	M V ORI	0		
Main vertical enhancer coring (SA10 [D3-2])	[0-3]	M V CORE	0		

■Line adjustment 5 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Sub horizontal enhancer gain (SA14 [D13-12])	[0-3]	S H GAIN	0		
Sub horizontal enhancer limiter (SA14 [D11-10])	[0-3]	S H LIMIT	1		
Sub horizontal enhancer f0 (SA14 [D8])	[0-1]	S H F0	1		
Sub vertical enhancer gain (SA14 [D7-6])	[0-3]	S V GAIN	0		
Sub vertical enhancer replicable (SA14 [D5-4])	[0-3]	S V ORI	1		
Sub vertical enhancer coring (SA14 [D3-2])	[0-3]	S V CORE	2		

■Line adjustment 6 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Brightness R (SA0C [D13-8])	[0-63]	BRIGHT R	16		
Brightness G (SA0D [D13-8])	[0-63]	BRIGHT G	16		
Brightness B (SA0E [D13-8])	[0-63]	BRIGHT B	16		
γ control ON/OFF (SA1A [D15])		GAMMA	OFF		
RGB simultaneous γ1 inflection point (SA1A [D5-D0])	[0-63]	GAMMA 1	0		
RGB simultaneous γ2 inflection point (SA1B [D12-8])	[0-31]	GAMMA 2	4		
RGB simultaneous γ3 inflection point (SA1B[D4-D0])	[0-31]	GAMMA 3	1		
RGB simultaneous γ slope A (SA1A [D14-12])	[0-7]	GAMMASLP A	4		
RGB simultaneous γ slope B (SA1B [D15-13])	[0-7]	GAMMASLP B	1		
RGB simultaneous γ slope C (SA1B [D7-5])	[0-7]	GAMMASLP C	1		

Note 1… It should be noted that the displayed value (E2PROM written value) and the double window IC register value are different for the following items.
(Because the relationship between the double window IC register value and the screen output value is not linear, conversion by software is necessary.)

Brightness R
Brightness G
Brightness B

[BRIGHTNESS R, G, B]

Indicated value (=adjustment value) (DEC)	EEPROM written value (DEC)	Registered value of 2- display IC (BIN)	
63	63	011111	(MAX)
62	62	011110	
:	:	:	
33	33	000001	
32	32	000000	(TYP)
31	31	111111	
:	:	:	
1	1	100001	
0	0	100000	(MIN)

■Line adjustment 7 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Main PLL0 (SA24 [D15-D8])	[0-255]	MAIN PLL0	158		
Main PLL1 (SA24 [D7-D0])	[0-255]	MAIN PLL1	13		
Main PLL2 (SA25 [D15-D8])	[0-255]	MAIN PLL2	204		
Main PLL3 (SA25 [D7-D0])	[0-255]	MAIN PLL3	4		

■Line adjustment 8 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
TV sub PLL0 (SA26 [D15-8])	[0-255]	SUB PLL0 TV	140		
TV sub PLL1 (SA26 [D7-D0])	[0-255]	SUB PLL1 TV	136		
Other sub PLL0 (SA27 [D15-D8])	[0-255]	SUB PLL0	140		
Other sub PLL1 (SA27 [D7-D0])	[0-255]	SUB PLL1	141		
TV sub PLL2 (SA28 [D15-8])	[0-255]	SUB PLL2 TV	100		
TV sub PLL3 (SA28 [D7-D0])	[0-255]	SUB PLL3 TV	68		
Other sub PLL0 (SA29 [D15-D8])	[0-255]	SUB PLL2	152		
Other sub PLL1 (SA29 [D7-D0])	[0-255]	SUB PLL3	137		

■Line adjustment 9 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
SA46[D15-8]	[0-255]	SA46H UPPER	2		
SA46[D7-D0]	[0-255]	SA46H LOWER	0		
SA47[D15-8]	[0-255]	SA47H UPPER	2		
SA47[D7-D0]	[0-255]	SA47H LOWER	0		

■ Parameter setting mode for dimmer

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Maximum Backlight power	[0-255]	BL MAX	C4		
Minimum Backlight power	[0-255]	BL MIN	59		
Dimmer threshold (high)	[0-255]	REF H	C0		
Dimmer threshold (low)	[0-255]	REF L	60		
Outside light point (high)	[0-255]	LUM H	E2		
Outside light point (middle)	[0-255]	LUM M	87		
Outside light point (low)	[0-255]	LUM L	52		
Backlight point (high)	[0-255]	BL H	C4		
Backlight point (middle)	[0-255]	BL M	C4		
Backlight point (low)	[0-255]	BL L	68		

- The data of a point (coordinate) for the dimmer is stored in the E2PROM but not subject to the calculation of CS because this part will be changed by the user operation.

6.6 TOUCH PANEL TEST MODE

[Mode IN method]

- After pressing [WIDE+SRC], press RESET and START. Then the screen will change to [touch panel adjustment mode].

[Menu types for mode]

- Calibration test mode consists of the following menu.
  (By clicking each menu, you can read the explanation for each menu.)

TOP menu
- Outermost circumference Inspection
- 16 points adjustment
- Coordinate inspection
- Calibration verification
- Data initialization

0. Explanation of the TOP menu

[Operational specifications]

Operational description	Main unit key	Remote controller key	Remote controller key code
Menu determination	A.MENU/ENTER	MENU_ENTER	AD19AF63
Selection cursor up movement	↑	↑	AD40
Selection cursor down movement	↓	↓	AD41

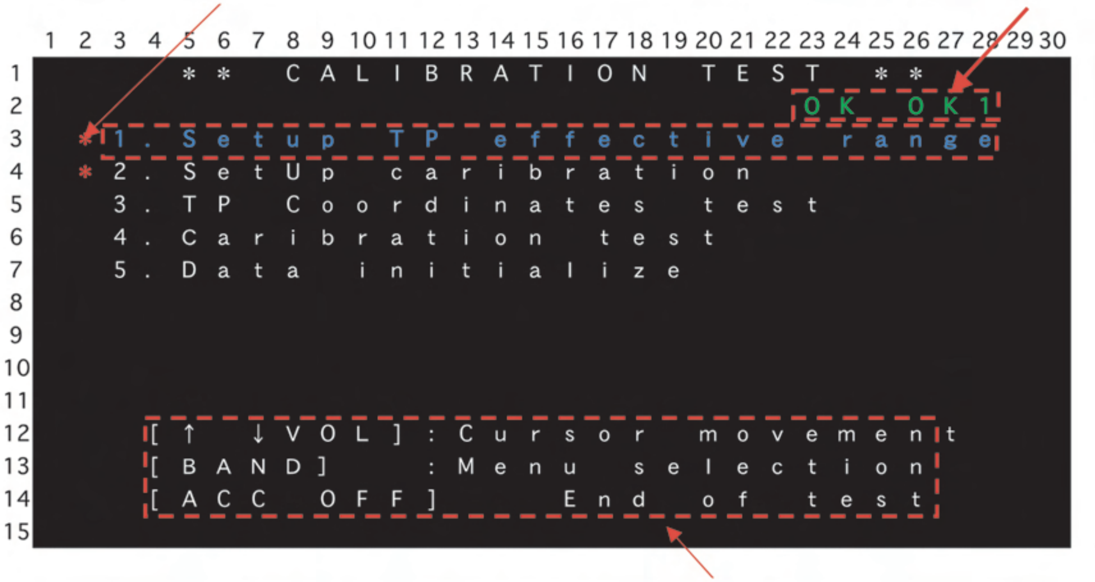
- Select the menu desired to be adjusted using the up/down key (↑ ↓), then press ENTER key to enter into the selected menu.

Note 1… Calibration menu can be selected only when adjustment of the outermost circumference has been completed normally.

[Display specifications]

Adjustment completed mark

Flicker initialized state



```
    ** CALIBRATION TEST **
                                OK OK1
 *1. Setup TP effective range
 *2. SetUp caribration
  3. TP Coordinates test
  4. Caribration test
  5. Data initialize





  [↑ ↓VOL]: Cursor movement
  [BAND]  : Menu selection
  [ACC OFF]    End of test
```

Operational specifications are displayed

- Conditions for lighting of the adjustment complete mark “＊”.

  Outermost circumference inspection :
  In case the outermost circumference inspection has been completed normally.

  16 points adjustment :
  In case the calibration has been completed normally.

- Conditions for the adjustment complete mark “＊” to go out

  Outermost circumference inspection :
  In case the outermost circumference inspection has never been performed.
  In case the EEPROM initialization has been performed.
  In case the adjustment value has been initialized.

  16 points adjustment :
  In case the 16 points adjustment has never been performed.
  In case the EEPROM initialization has been performed.
  In case the adjustment value has been initialized.

1. Set up TP effective range

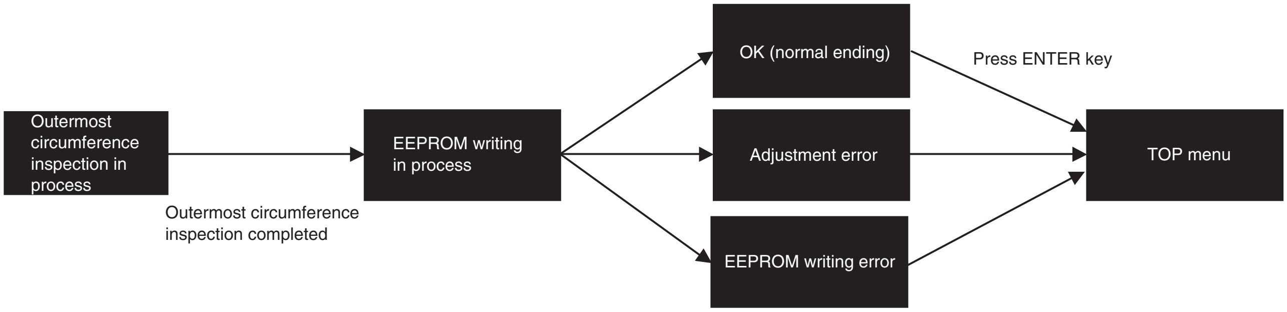
[Outline]

- Outermost circumference value of X and Y is obtained by tracing the outermost circumference of the touch panel screen.
  When exiting the menu screen by pressing ENTER key, the captured value is stored in the EEPROM.
  Furthermore, when storing the value, checking is made as to whether the value is within the range or not.
  If the value is within the range, OK is displayed, and X/Y upper and lower limit value and normal ending information, total of 5 byte data, are written in the EEPROM. (In or out of the range check is conducted according to the [Table of allowable range of setting value] shown below.)

- In the following cases, however, NG will be displayed without storing the EEPROM captured value.

  When the set value is outside of the range. (When the value exceeded the [Table of allowable range of setting value] below.)
  However, "adjustment NG information" (1 byte) is written into the EEPROM.
  When writing into the EEPROM failed.

- The transition of the state for the above described outermost circumference inspection is outlined below.


Outermost circumference inspection in process
Outermost circumference inspection completed
EEPROM writing in process
OK (normal ending)
Adjustment error
EEPROM writing error
Press ENTER key
TOP menu

- Refer to the "Memory item list and E2PROM" for the stored area of the setting value in the EEPROM. Initial value and setting value allowable range are as shown below.

[Table of BEFORE initial value]

Coordinate	Minimum value	Maximum value
X	43	247
Y	50	238

[Table of AFTER initial value]

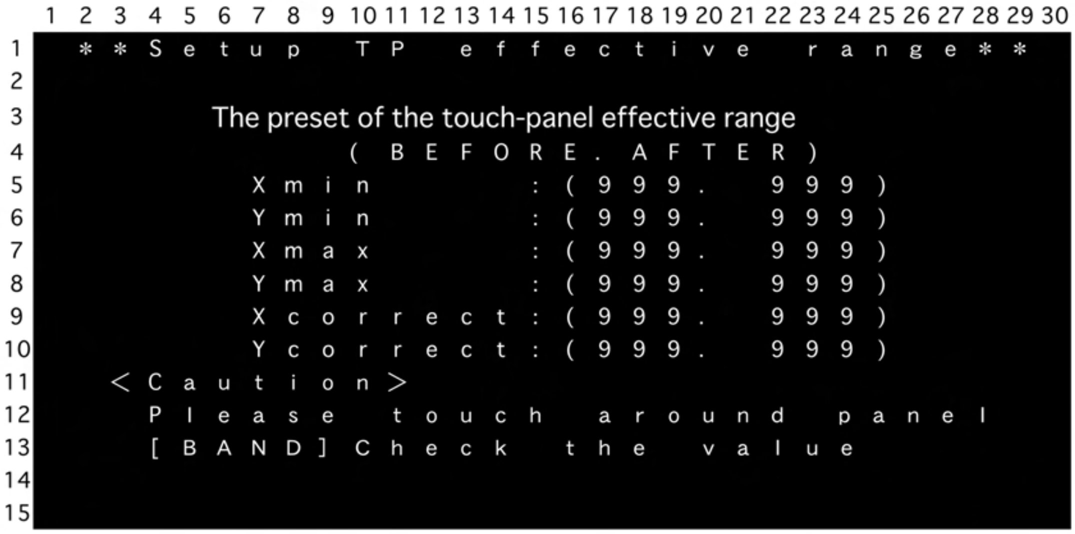
Coordinate	Minimum value	Maximum value
X	90	180
Y	90	180

[Table of setting value allowable range]

Coordinate	Minimum value	Maximum value
X	0~65	225~255
Y	0~70	220~255

[Display specifications]

Outermost circumference inspection in process

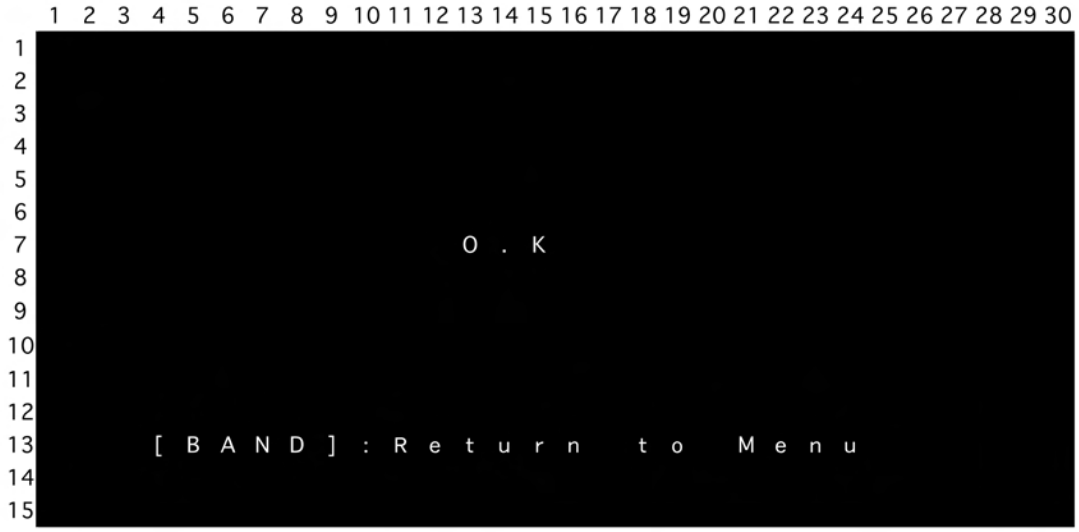

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

```
 **Setup TP effective range**

     The preset of the touch-panel effective range
             (BEFORE. AFTER)
          Xmin     :(999.  999)
          Ymin     :(999.  999)
          Xmax     :(999.  999)
          Ymax     :(999.  999)
          Xcorrect :(999.  999)
          Ycorrect :(999.  999)
  <Caution>
   Please touch around panel
   [BAND] Check the value
```

- X/Y information of “MIN” and “MAX” of the outermost circumference are displayed.
- “BEFORE” indicates the value stored in the EEPROM.
  “AFTER” indicates MIN/MAX of the A/D value currently captured.

When ended normally.

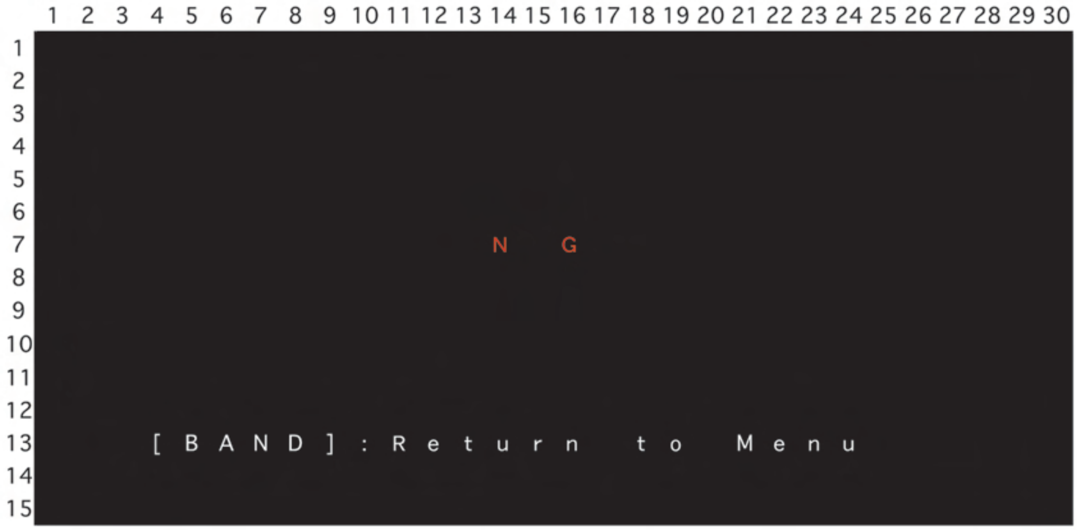

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

```
             O.K

   [BAND]:Return to Menu
```

- The data written are as follows.
  Upper limit value and lower limit value of X.
  Upper limit value and lower limit value of Y.
  Adjustment OK information.

When the captured value is outside of the allowable range.


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

NG

[BAND]:Return to Menu

- The data written is as follows.
  Adjustment NG information.

[Key operation specifications]

Operational description	Main unit key	Remote controller key	Remote controller key code
To TOP menu	BAND	MENU_ENTER	AD19AF63

2. Set up calibration

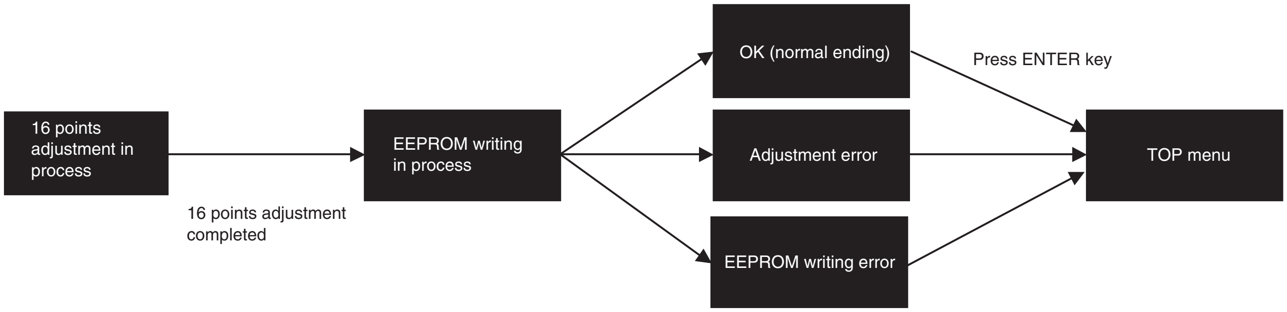
[Outline]

- Touch the cursor “+” displayed on the screen. When correctly touched, the cursor will disappear, and the next cursor will appear. Calibration is conducted by repeating this process 16 times. When the 17th point has been finally touched, setting information for the 16 points and the normal ending information, total of 17 byte data, are written into the EEPROM, and the screen returns to the TOP menu.

- In the following cases, however, NG will be displayed without storing the EEPROM captured value.

When the menu is exited before touching the 17th point.
However, “adjustment NG information” (1 byte) is written into the EEPROM.
When writing into the EEPROM failed.

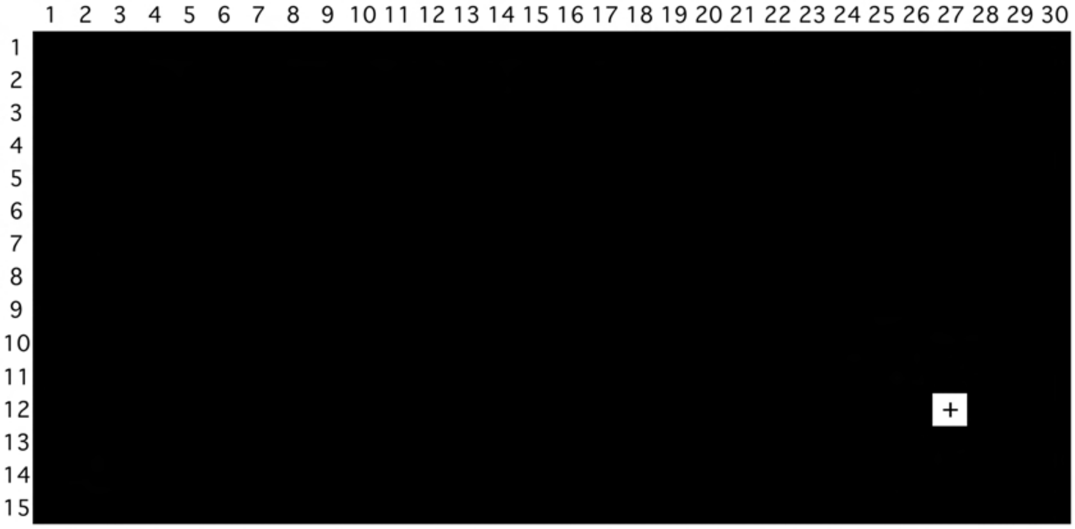
- The transition of the state for the above described 16 points adjustment is outlined below.


16 points adjustment in process
16 points adjustment completed
EEPROM writing in process
OK (normal ending)
Adjustment error
EEPROM writing error
Press ENTER key
TOP menu

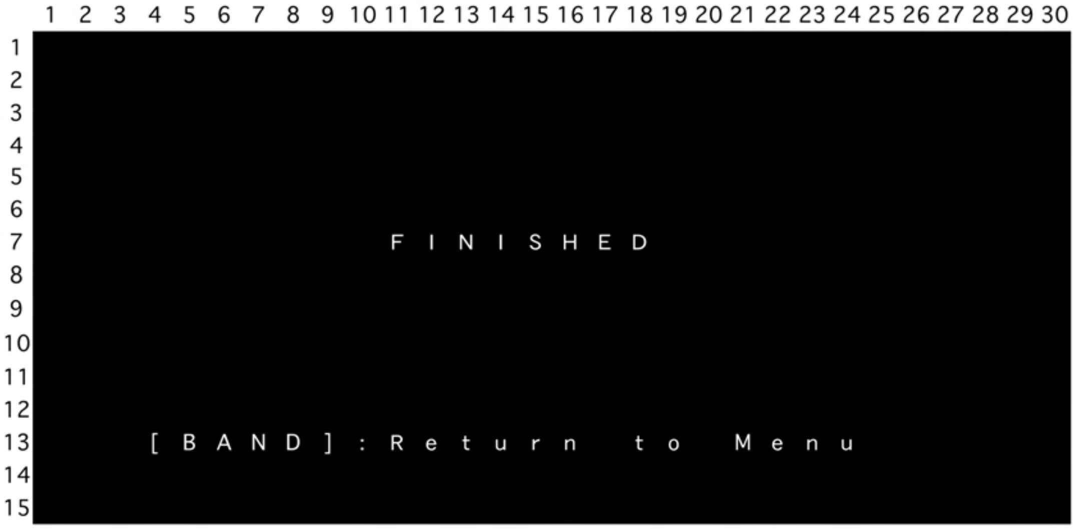
- Refer to the material titled “Memory item list and E2PROM” for the stored area of the setting value in the EEPROM.

[Display specifications]

16 points adjustment in process


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
+

When ended normally.


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

FINISHED

[BAND]:Return to Menu

- The data written are as follows.
  X coordinate (16 points)
  Y coordinate (16 points)

[Key operation specifications]

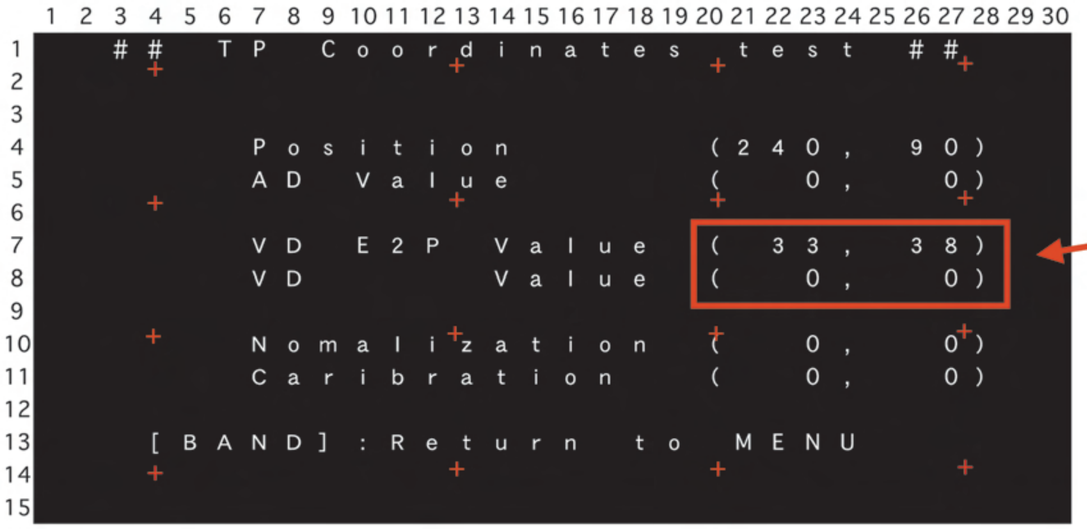
Operational description	Main unit key	Remote controller key	Remote controller key code
To TOP menu	A.MENU/ENTER	MENU_ENTER	AD19AF63

3. TP coordinates test

[Outline]

- Coordinate before and after the correction when the touch panel is touched is displayed, and the operation is verified. Furthermore, the cursor can be moved by using the up/down/left/right keys, and the coordinate of the cursor center is displayed.
  The cursor is displayed in red at the positions where the cursor was displayed during 16 points adjustment.

[Display specifications]



```
  ## TP Coordinates test ##

     Position          (240,  90)
     AD Value          (  0,   0)

     VD E2P Value      ( 33,  38)
     VD     Value      (  0,   0)

     Nomalization      (  0,   0)
     Caribration       (  0,   0)

  [BAND]:Return to MENU
```

Display is made in HEX.

- POSITION : XY coordinate of the + cursor (movable) is displayed.
  Operational range is (0, 0)~(480, 240).
- AD : AD data value (X direction, Y direction), representing the coordinate of the point pressed, is displayed.
- VD E2P : VD value (the value registered at the time of circumference setting) preset in the E2PROM.
  VD : VD value currently being pressed.
- NORMAL : The coordinate (X direction, Y direction), which is the result of normalizing the AD data value currently being pressed within the effective range, is displayed.
- CALIBRATION : The coordinate (X direction, Y direction), which is the result of applying the correction by calibration to the normalized coordinate, is displayed.
- "+" displayed in the 16 points adjustment is displayed in red.
- Movable "+" is displayed in white.

[Key operation specifications]

Operational description	Main unit key	Remote controller key	Remote controller key code
To TOP menu	BAND	MENU_ENTER	AD19AF63
Cursor upward movement	VOL UP	↑	AD40
Cursor downward movement	VOL DOWN	↓	AD41
Cursor leftward movement	TR DOWN	←	AD42
Cursor rightward movement	TR UP	→	AD43

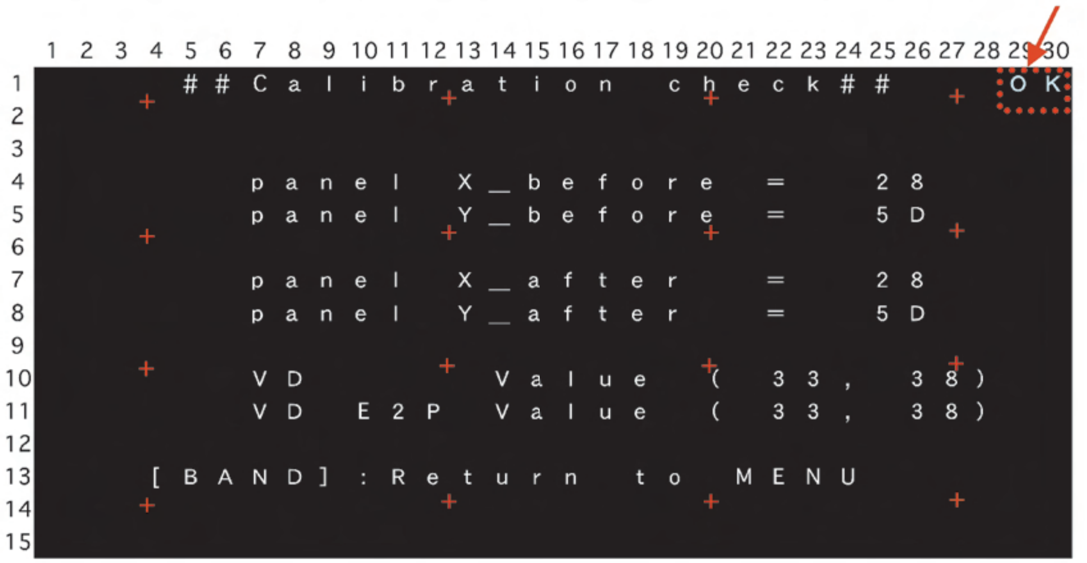
4. Calibration check

[Outline]

- Coordinate before and after the correction when the touch panel is touched is displayed, and the operation is verified. The cursor is displayed in red at the positions where the cursor was displayed during 16 points adjustment.

[Display specifications]

OK condition : the length between + position and cursor indication is within ± 6 dot at the center



```
##Calibration check## OK

panel X_before = 28
panel Y_before = 5D

panel X_after  = 28
panel Y_after  = 5D

VD     Value (33, 38)
VD E2P Value (33, 38)

[BAND] : Return to MENU
```

[Key operation specifications]

Operational description	Main unit key	Remote controller key	Remote controller key code
To TOP menu	BAND	MENU_ENTER	AD19AF63

Supplemental explanation
Follow the steps below to convert AD value entered from touch panel to the corrected coordinates.
(Follow ① → ② in turn. Execute them during regular operation.)

① Data expansion of raw coordinates
Coordinates after data expansion = (raw coordinates – minimum value) × 255 ÷ (maximum value – minimum value)
✻ If raw coordinates are 0, the coordinates after data expansion should be 0.

② Coordinates correction after data expansion
(1) If the coordinates are under 224 after data expansion;
Coordinates after correction = coordinates after data expansion + correction value × (1 – (coordinates after data expansion – 224) ÷ 31)
✻ 31: Because there are 31 points of coordinates position from the value 225 to 255.
✻ The effect of correction value declines as the value is going to 255.

(2) If the coordinates are less than or equal to 32 after data expansion;
Coordinates after correction = coordinates after data expansion + (correction value × coordinates after data expansion ÷ 32)
✻ 32 : Because there are 32 points of coordinates position from the value 0 to 32 (coordinates 0 is not included).
✻ The effect of correction value declines as the value is going to 0.

(3) If the coordinates are 33 ~ 224 after data expansion;
Coordinates after correction = coordinates after data expansion + B + (A – B) × (coordinates after data expansion – C) ÷ 64)
✻ 64 : Because there are 64 points of coordinates position in each area.
✻ Add the correction value at the left corner first. Then, the effect of correction value is increasing as going to right.

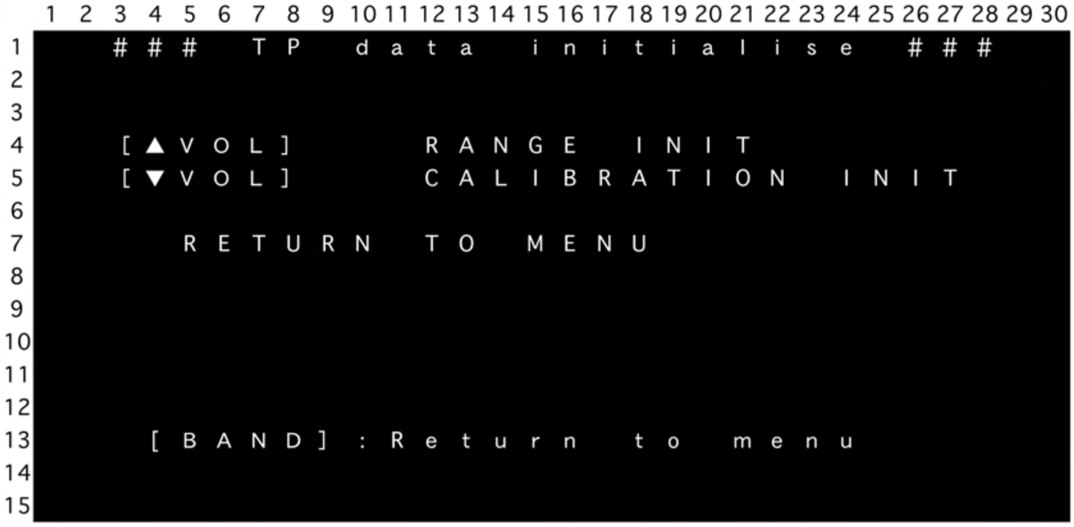
Coordinates after data	A	B	C
33 ~ 95	Right corner correction data of correction area	Left corner correction data of correction area	Left corner coordinates of correction area
96 ~ 160			
161 ~ 224			

5. Data initialize

[Outline]

- The result of the outermost circumference adjustment and of the 16 point adjustment are returned to the initial values.
  Regarding the outermost circumference adjustment and the 16 point adjustment, select the item desired to be initialized, then press ENTER key for initialization.
  When the initialization is successfully completed, the "adjustment completed" mark will go out.
  Furthermore, the items not adjusted will not be initialized.

[Display specifications]



```
### TP data initialise ###

[▲VOL]     RANGE INIT
[▼VOL]     CALIBRATION INIT

RETURN TO MENU

[BAND]:Return to menu
```

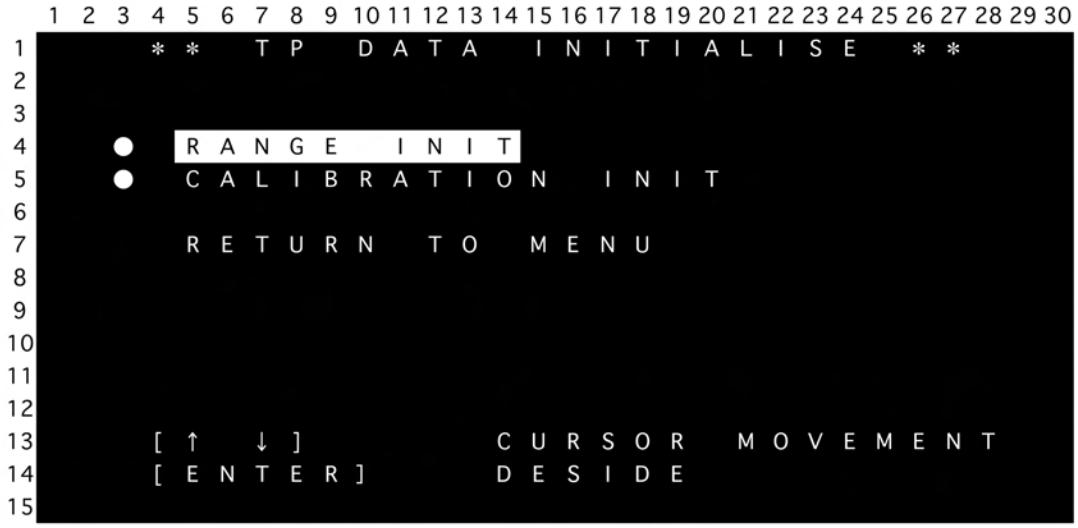
- "●" is the "adjustment completed" mark. It will go out when initialized.

- Select "RANGE INIT", and press ENTER.
  The result of outermost circumference adjustment is initialized.

- Select "CALIBRATION INIT", and press ENTER.
  The result of 16 points adjustment is initialized.

- Select "RETURN TO MENU", and press ENTER.
  Move to the TOP menu.

Initial data writing into the EEPROM is in process.
(When “RANGE INIT” or “CALIBRATION INIT” is selected and ENTER is pressed.)



** TP DATA INITIALISE **

● RANGE INIT
● CALIBRATION INIT

RETURN TO MENU

[↑ ↓] CURSOR MOVEMENT
[ENTER] DESIDE

- The state of data being written into the EEPROM.

- The character string of “EEPROM WRITE NOW” will flicker.
  Note… Key action will not be accepted when this screen is being displayed.

- When the initialization has successfully completed, the adjustment completed mark “●” will go out.
  When the initialization has failed, the adjustment completed mark “●” will stay lit.

[Operation specifications]

Operational description	Main unit key	Remote controller key	Remote controller key code
Enter	BAND	MENU_ENTER	AD19AF63
Selection cursor upward movement	VOL UP	↑	AD40
Selection cursor downward movement	VOL DOWN	↓	AD41

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● Preparation for Removing the Monitor Assy

To remove the Monitor Assy block, it must always be moved to the OPEN position.

1. Rotate the gear using a screwdriver, etc. (ø2.8 or smaller) from the slit on the bottom surface of the main unit (Fig.1) in the direction of the arrow, and move the Grille Assy to OPEN position.

Note)
Though the gear is heavy, please turn carefully not to inflict too much force. Turning with excessive force may cause damage in the rack or gear in the driving section.

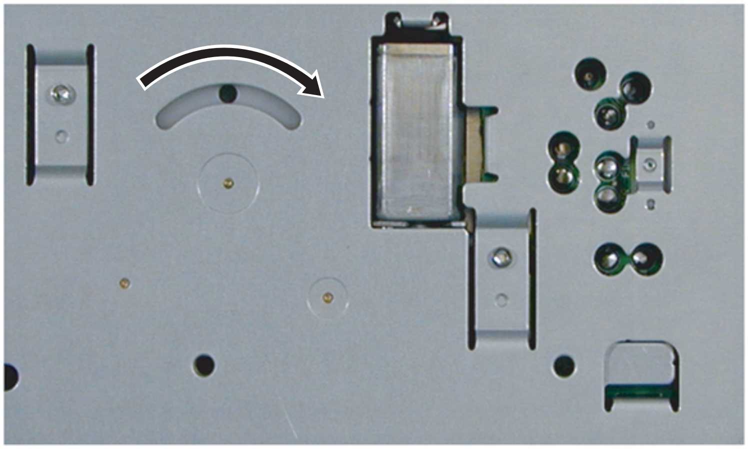


Fig.1

● Removing the Case (not shown)

1.Remove the Case.

● Removing the Monitor Assy and the Panel Assy

1 Remove the two screws. (Fig.2)

2 Remove the four screws. (Fig.2)

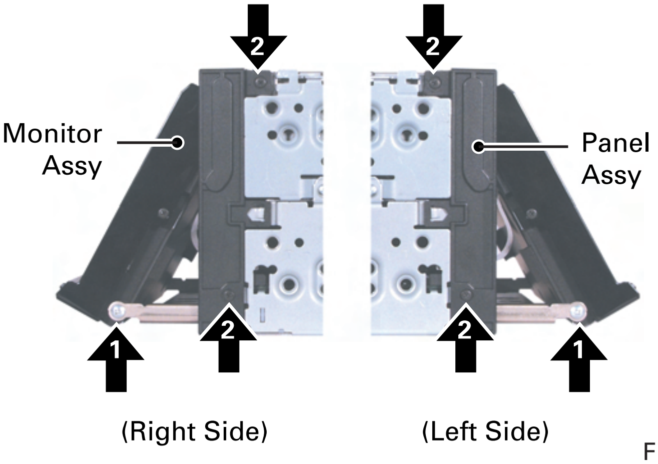

2
2
Monitor Assy
Panel Assy
1
2
2
1
(Right Side)
(Left Side)

Fig.2

3 Remove the screw and then disconnect the Flexible PCB. (Fig.3)

4 Remove the two screws and then remove the Monitor Assy. (Fig.3)

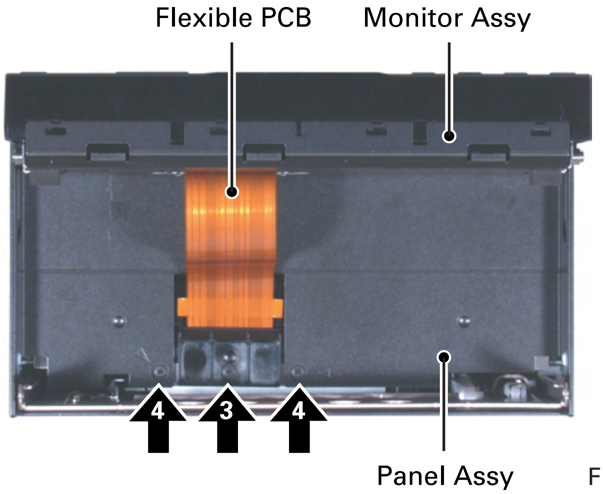

Flexible PCB
Monitor Assy
4
3
4
Panel Assy

Fig.3

5 Disconnect the two connectors and then remove the Panel Assy. (Fig.4)

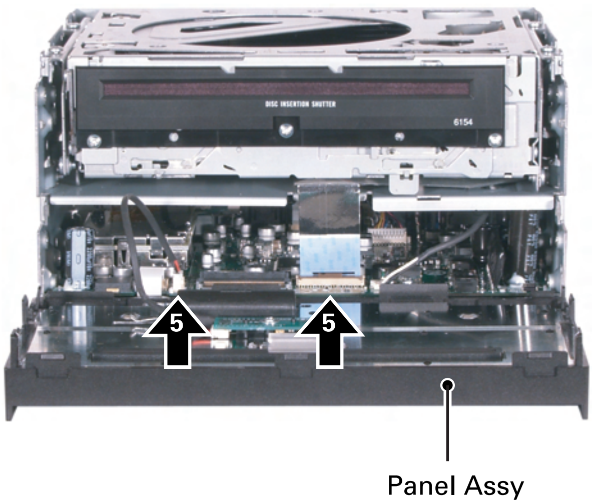
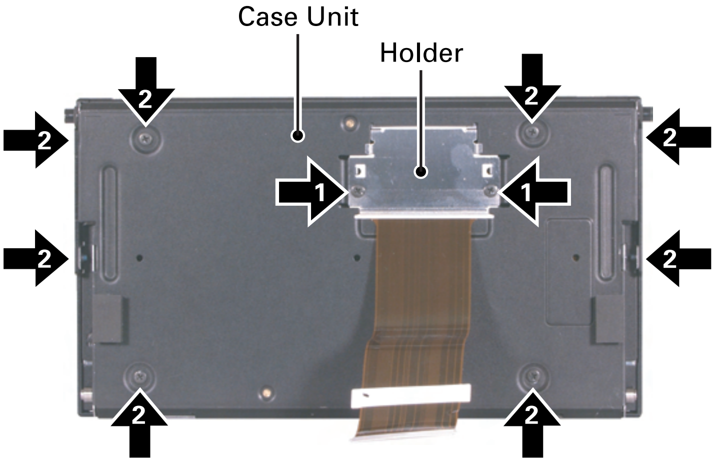

5
5
Panel Assy

Fig.4

Removing the Case Unit (Fig.5)

1 Remove the two screws and then remove the Holder.

2 Remove the eight screws and then remove the Case Unit.



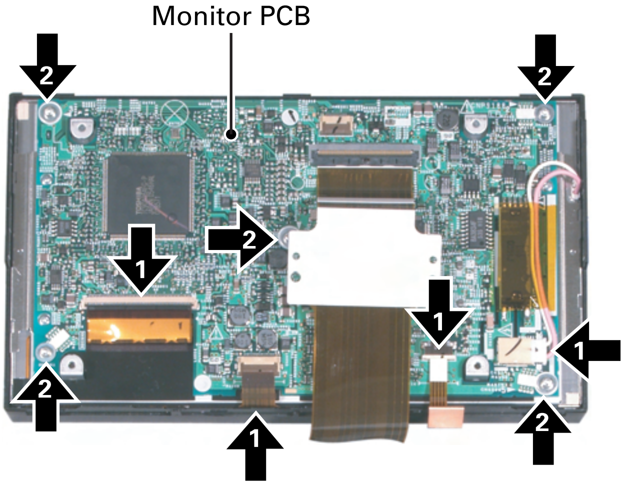
Caution:
When assembling the case unit, be careful not to nip (damage) the touch-panel's tail (left side) and FFC with back of the case.

Fig.5

Removing the Monitor PCB (Fig.6)

1 Disconnect the four connectors.

2 Remove the five screws and then remove the Monitor PCB.



About handling of touch panel
When replacing the touch panel (hereafter, "panel") located below the LCD panel, pay attention to the following.

- The panel is made of glass. So, be careful not to break or damage it.
- Do not leave your fingerprints on the panel display.
- The four sides and corners of the glass panel are sharp. So, handle it carefully to avoid any injury.

Fig.6

● Removing the DVD Mechanism Module

1 Disconnect the two connectors. (Fig.7)

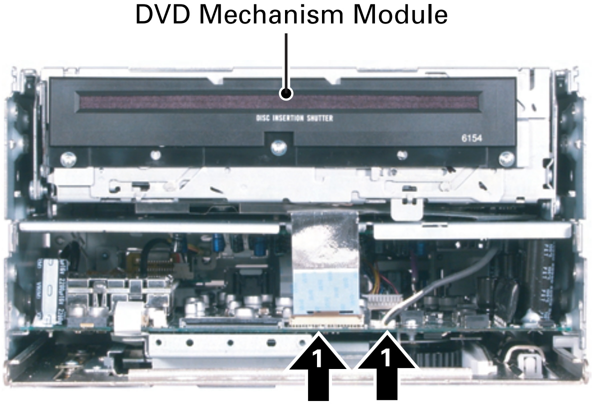

DVD Mechanism Module
DISC INSERTION SHUTTER
6154
1
1

Fig.7

2 Remove the four screws and then remove the DVD Mechanism Module. (Fig.8)

Caution:
When assembling or disassembling the DVD mechanism module, be sure to hold the external side.
When lifting the DVD mechanism module, lift it from the front side to avoid a burden on the connected connector.

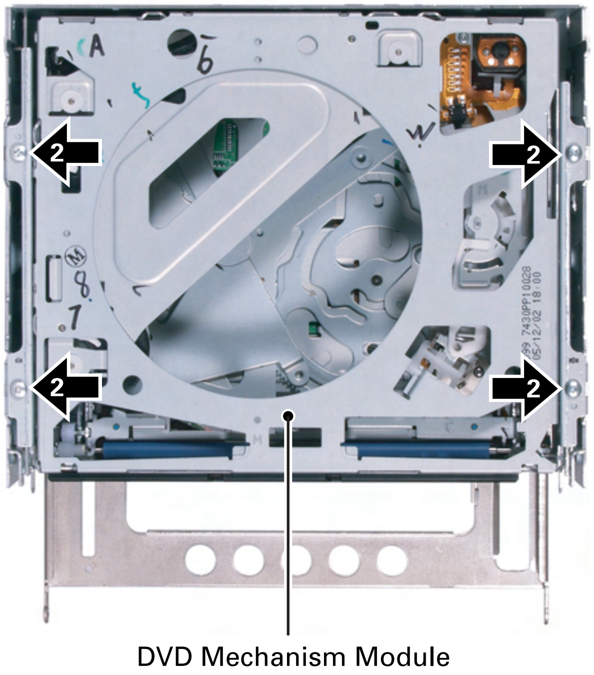

2
2
2
2
DVD Mechanism Module

Fig.8

● Removing the Chassis

1 Remove the six screws. (Fig.9)

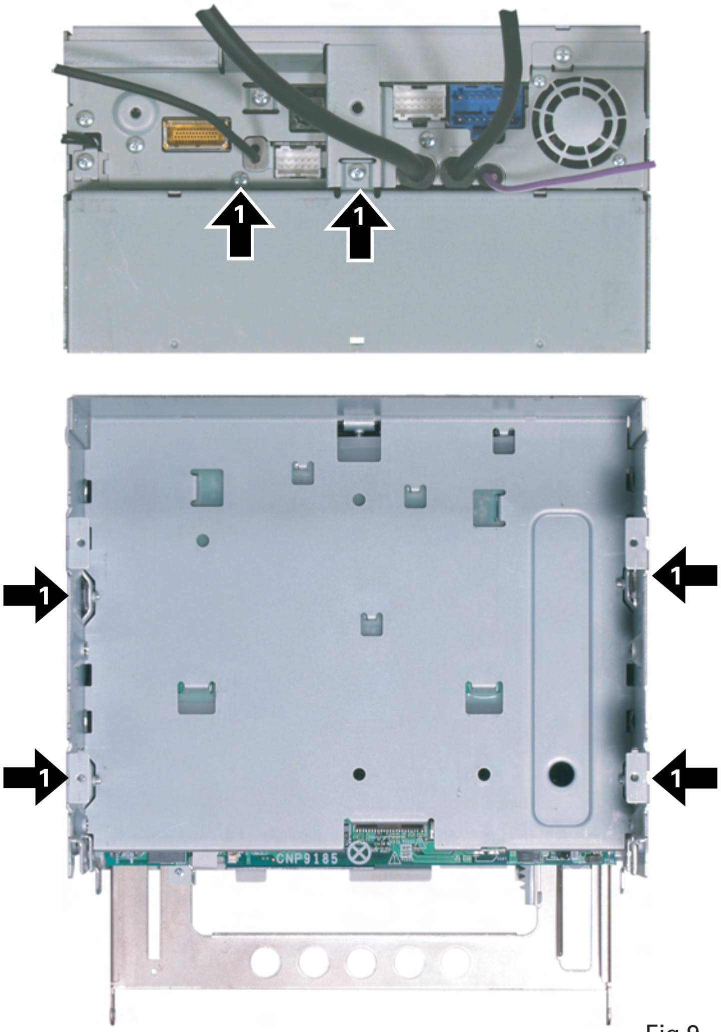


Fig.9

2 Disconnect the two connectors and then remove the Chassis. (Fig.10)

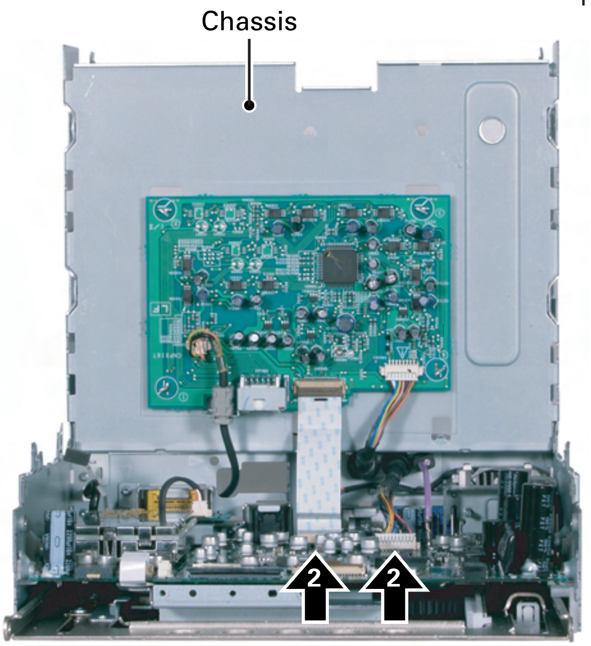


Fig.10

● Removing the Mother PCB

1 Remove the six screws. (Fig.11)

2 Remove the two screws. (Fig.11)

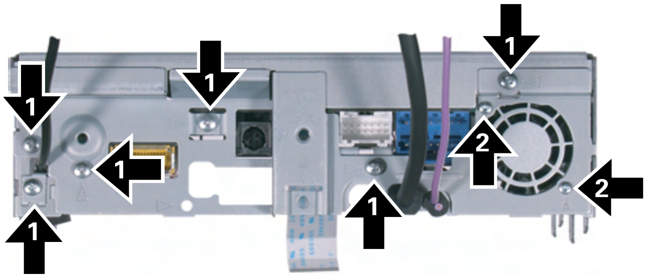


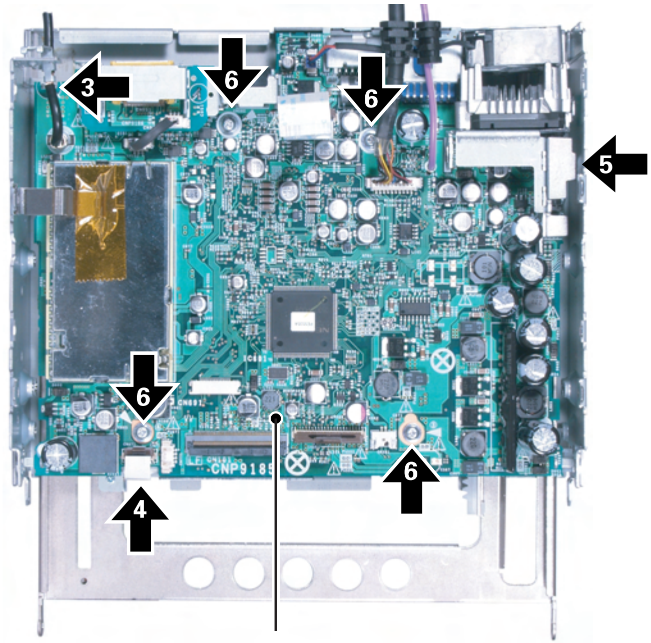
Fig.11

3 Straighten the tab at location indicated. (Fig.12)

4 Disconnect the connector. (Fig.12)

5 Remove the screw. (Fig.12)

6 Remove the four screws and then remove the Mother PCB. (Fig.12)



Mother PCB

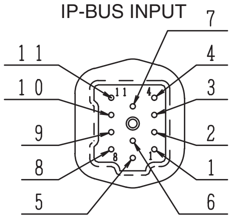
Fig.12

---

* Please refer to Mechanism Manual (CRT3495) for removing module part of DVD mechanism.
Three GGF1538 are necessary to build up MG4 mechanism.

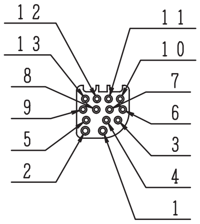
7.1.2 CONNECTOR FUNCTION DESCRIPTION

IP-BUS INPUT


11
10
9
8
5
7
4
3
2
1
6

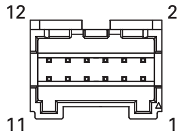
1. BUS+
2. BUSG
3. LG
4. NC
5. BUS-
6. BUSG
7. BUSLI
8. ASENB
9. BUSRI
10. BUSRG
11. BUSLG

AV-BUS INPUT

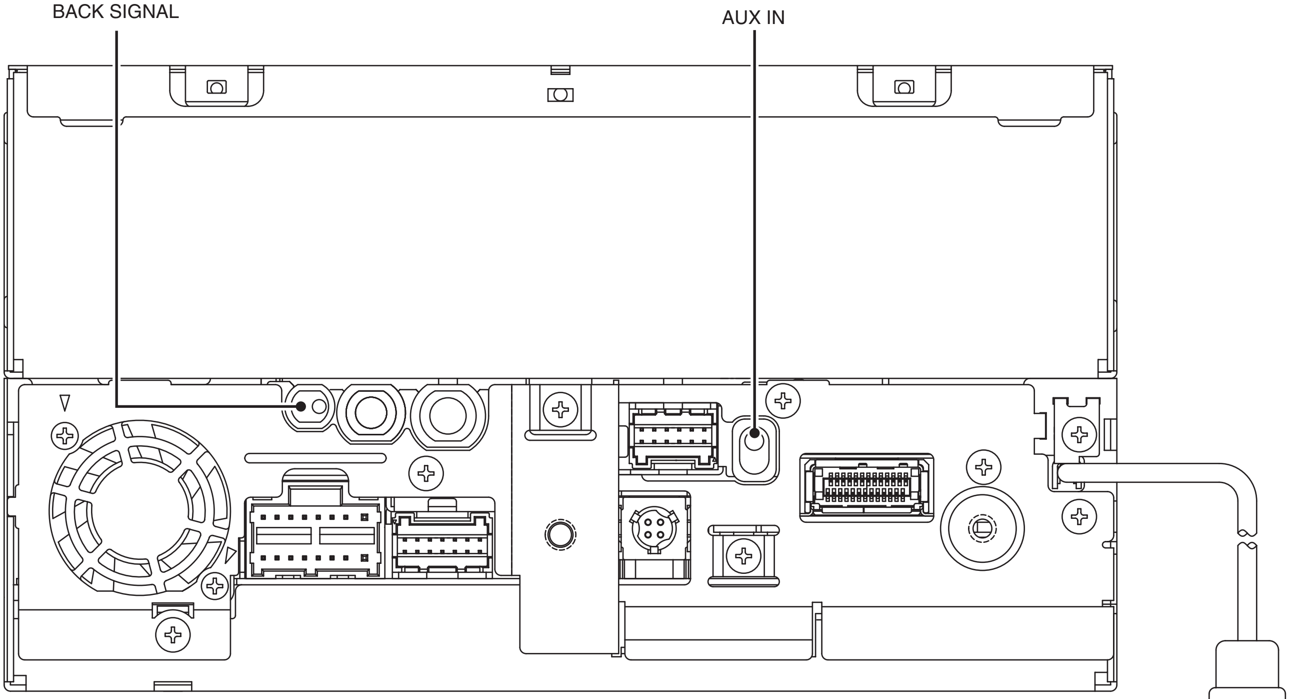

12
13
8
9
5
2
11
10
7
6
3
4
1

1. AVIN-
2. AVIN+
3. NC
4. VSEL2
5. VSEL1
6. NC
7. AV_GND
8. NC
9. NC
10. REMIN
11. GND
12. AVON
13. NC

RCA INPUT

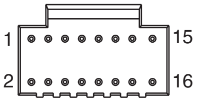


1 : V1
2 : V1GND
3 : L1GND
4 : L1
5 : R1
6 : R1GND
7 : V2
8 : V2GND
9 : L2GND
10 : L2
11 : R2
12 : R2GND


BACK SIGNAL
AUX IN

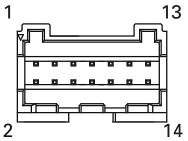
FM/AM ANTENNA

POWER SUPPLY,
SPEAKER OUTPUT



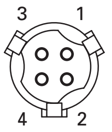
1 : FL-
2 : RL-
3 : FL+
4 : RL+
5 : FR-
6 : RR-
7 : FR+
8 : RR+
9 : P.B.
10 : VGND
11 : ACC
12 : B.REM
13 : ILM
14 : MUTE
15 : B.UP
16 : GND

RCA OUTPUT



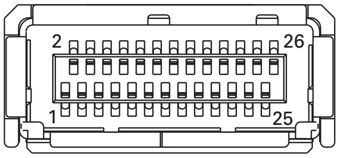
1 : REARV
2 : VGND
3 : FL
4 : FLGND
5 : FR
6 : FRGND
7 : SWL
8 : SWLGND
9 : SWR
10 : SWRGND
11 : RL
12 : RLGND
13 : RR
14 : RRGND

DIGITAL OUTPUT



1. GND
2. GND
3. OPT5V
4. OPTO

RGB VIDEO INPUT

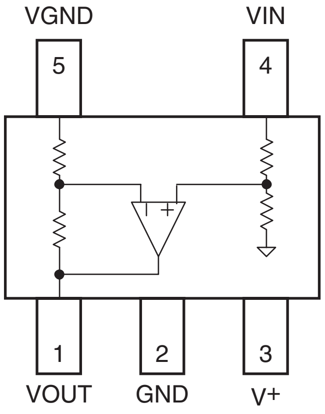


1 : CCR
2 : CCG
3 : CCB
4 : CCSYNC
5 : GNDSIG
6 : DVDVBS
7 : GNDDVD
8 : YS
9 : NC
10 : CCAUL
11 : CCAUR
12 : GNDAU
13 : ONSEI+
14 : ONSEI-
15 : REAUR
16 : REAUL
17 : GNDRAU
18 : CCREM
19 : DSEN
20 : TVON
21 : GION
22 : MONON
23 : VSW5
24 : HTXD
25 : HRXD
26 : GNDD

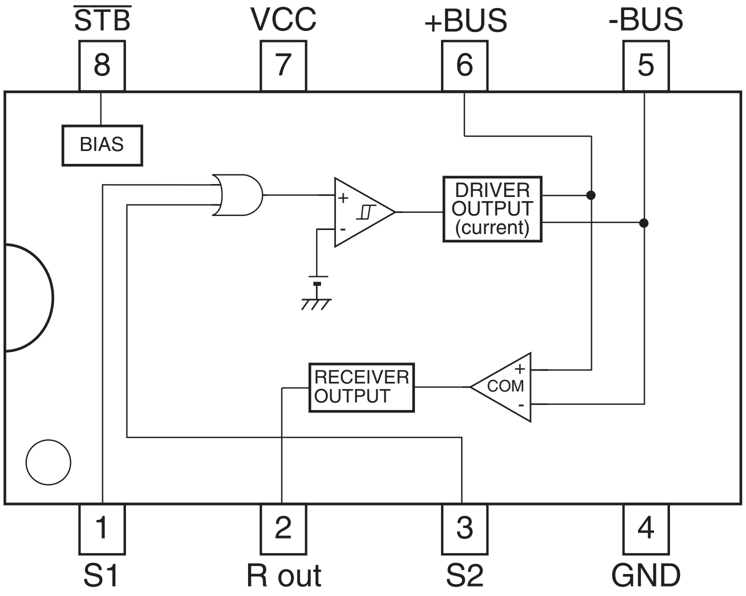
7.2 IC

NJM2505F
HA12241FP
PE5535A
PAL007B
TC74VHC08FTS1
BP5451-1
PA2028A1
S-818A35AUC-BGP
NJM2136V
S-1131B25UC-N4K
TC7SH02FUS1
OZ961ISN
TC7SH32FUS1
TC7SET04FUS1
TC74VHC04FTS1
S-80830CNNB-B8P
S-93C66BD0I-J8
TC90A96AFG-P
PE5536A
K4S641632K-UC75
PD8165A
EDS1232AATA-75
PE5555A
PD6541B
TC7SH86FUS1
BR93L56RFVM-W

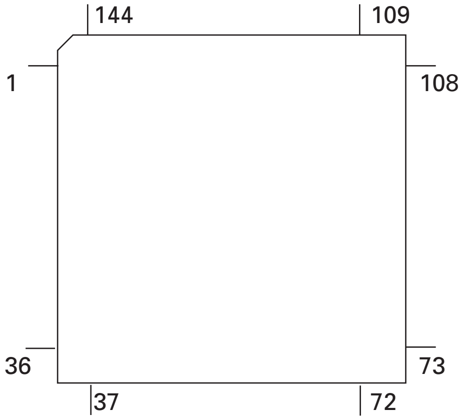
NJM2505F


VGND
VIN
5
4
1
2
3
VOUT
GND
V+

HA12241FP


STB
VCC
+BUS
-BUS
8
7
6
5
BIAS
+
-
DRIVER
OUTPUT
(current)
RECEIVER
OUTPUT
COM
+
-
1
2
3
4
S1
R out
S2
GND

PE5535A

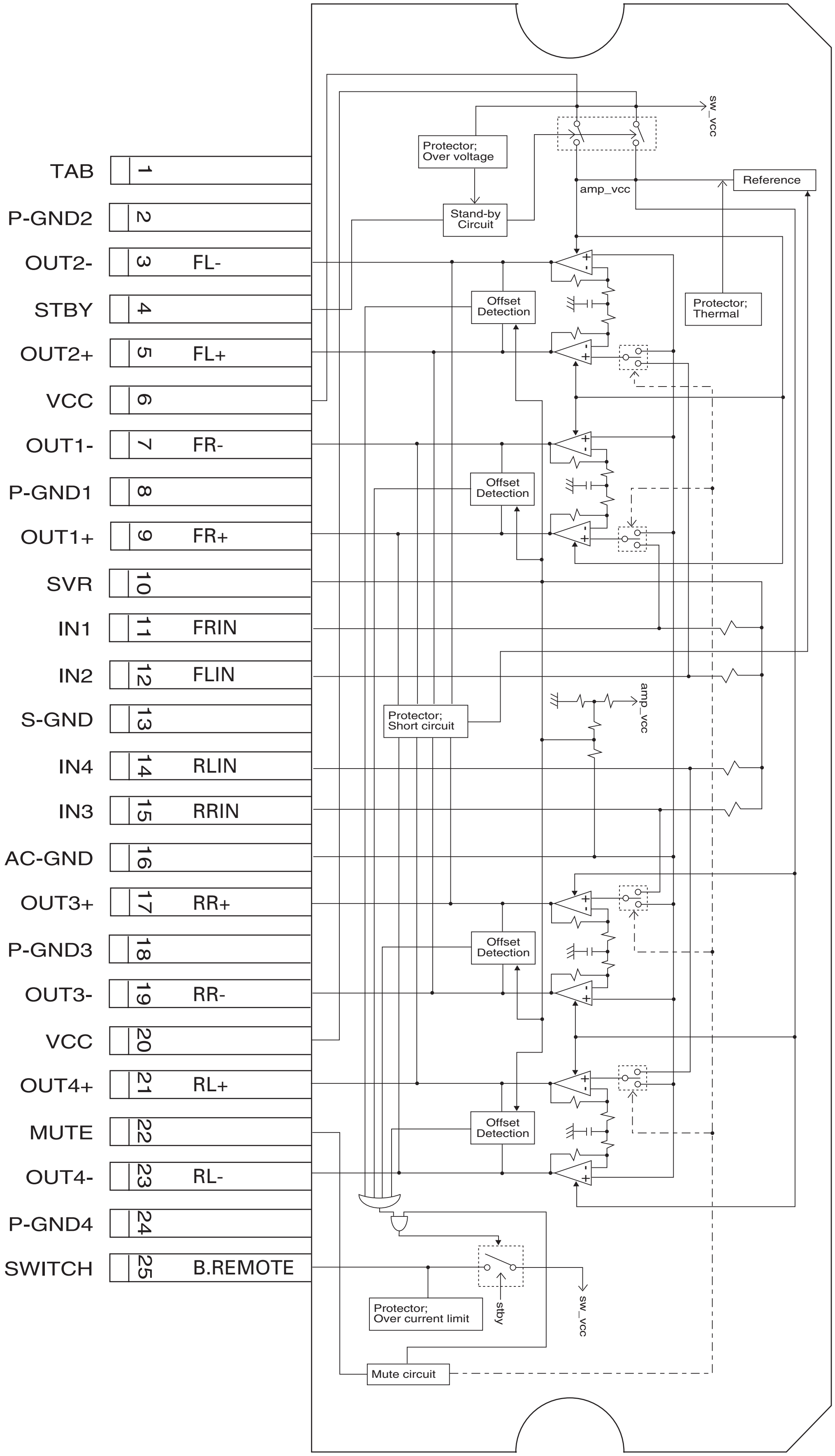

144
109
1
108
36
73
37
72

●Pin Functions(PE5535A)

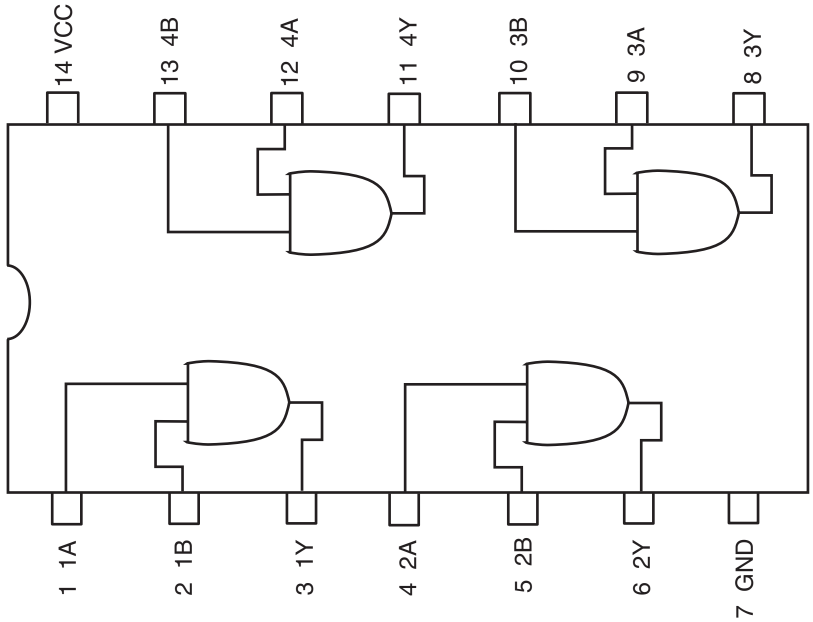
Pin No.	Pin Name	I/O	Function and operation
1	NC		Not used
2,3	MODEL0,1	I	Model select input
4	NC		Not used
5	PORTGND0		Port GND
6	ROMCS	O	ROM Chip select output
7	ROMCLK	O	ROM Clock output
8	ROMDATA	I/O	ROM Data input/output
9	EVSDA	O	Electronic volume:Data output
10	EVSCL	O	Electronic volume:Clock output
11	FRONTMUTE	O	Front Mute output
12	EVSEL	O	Electronic volume:Strobe output
13	FLPPW	O	FLAP motor power supply control output
14	MOT0	O	FLAP motor control output
15	MOT1	O	FLAP motor control output
16	PULSE0	I	FLAP movement detection input
17	PULSE1	I	FLAP movement detection input
18	NC		Not used
19	HOMESW	I	FLAP close position sense input
20	OPENSW	I	FLAP open position sense input
21	NC		Not used
22	PORTVDD0		Port power supply
23	GUIDEMUTE	O	Navigation guide voice mute output
24-28	NC		Not used
29	ACCPW	O	ACC power control output
30	AMPPW	O	Amp power control output
31	SYSPW	O	Power supply control output
32	VPW	O	Video power control output
33	DDCONTL	O	DC/DC converter control output
34	INSILM	O	Disc loading slot illumination output
35	ILMGRN	O	Illumination output
36	PCL	O	System clock ouptut
37	GND0		GND
38	CPUREG		Filter capacitor connected
39	VDD0		Power supply
40	$\overline{\text{RESET}}$	I	System reset input
41	VPP		Power supply for frash ROM
42	TSI	I	Test data input
43	NC		Not used
44	TCK	I	Test data clock input
45	NC		Not used
46	TUNPDI	I	TUNER PLL data input
47	TUNPDO	I/O	TUNER PLL data input/output
48	TUNPCK	I/O	TUNER PLL clock input/output
49	NC		Not used
50	RCAMUTE	O	RCA REAR mute output
51,52	VSELIN1,2	I	VSEL input
53	AVONIN	I	AV-BUS AV video sense input
54,55	NC		Not used
56	TESTIN	I	Test mode input
57	NC		Not used
58	PRGON	I	System microcomputer program mode input
59	VPPON	O	VPP ON/OFF output
60	PORTVDD1		Port power supply
61	PRGSW	I	System microcomputer programing mode input
62-67	NC		Not used
68	BEEP	O	BEEP output
69	$\overline{\text{BSENS}}$	I	Backup sense input

Pin No.	Pin Name	I/O	Function and operation
70,71	XT2,1		Sub clock oscillator connect
72	GND2		GND
73,74	X1,2		Main clock oscillator connect
75,76	NC		Not used
77,78	COOLCNT1,2	O	Fan control output1,2
79,80	NC		Not used
81	CONTBIN	I	DVD Mechanism module active sense input
82,83	NC		Not used
84	AVSDA	I/O	AV selector data input/output
85	NC		Not used
86	AVSCL	O	AV selector clock output
87	ASENBO	O	Slave ACC sense output
88	IPPW	O	IPBUS driver power supply contorl output
89	NC		Not used
90	$\overline{\mathrm{IERX}}$	I	IPBUS data input
91	$\overline{\mathrm{IETX}}$	O	IPBUS data output
92	PORTGND1		Port GND
93-95	NC		Not used
96	$\overline{\mathrm{ASENS}}$	I	ACC sense input
97-99	NC		Not used
100	TUNPCE	O	TUNER PLL chip enable output
101	$\overline{\mathrm{TUNPCE2}}$	O	TUNER PLL chip enable output 2
102	PORTVDD2		Port power supply
103	NC		Not used
104	CONTMG	O	DVD Mechanism module power supply control output
105	DREM	O	NAVI Reboot remote control output
106	REMUTE	O	NAVI remote control mute output
107	RXMOM	I	Display microcomputer data input
108	TXMON	O	Display microcomputer data output
109	SWVDD	O	Display microcomputer power supply output
110	NC		Not used
111	RXMG4	I	DVD Mechanism module data input
112	TXMG4	O	DVD Mechanism module data output
113	IRQPWR	O	DVD Mechanism module backup power output
114	NC		Not used
115	WAKEUPMG	O	DVD Mechanism module start request output
116	NC		Not used
117	RXNAV	I	NAVI data input
118	TXNAV	O	NAVI command output
119	$\overline{\mathrm{RGBARI}}$	I	RGB navigation ON sense input
120	NC		Not used
121	NMIXCNT	O	Navigation guide voice mute control select output
122	MUTE	O	Mute output
123	NC		Not used
124	AMPMUTE	O	AMP mute output
125	NC		Not used
126	$\overline{\mathrm{ISENS}}$	I	Illumination sense input
127	TELIN	I	TEL mute input
128	VDD1		Power supply
129	PBSENS	I	Parking brake sense input
130	BGSENS	I	Back gear sense input
131	GND1		GND
132-134	NC		Not used
135	TUNSL	I	TUNER signal level input
136-142	NC		Not used
143	ADCVDD		A/D Power supply
144	ADCGND		A/D GND

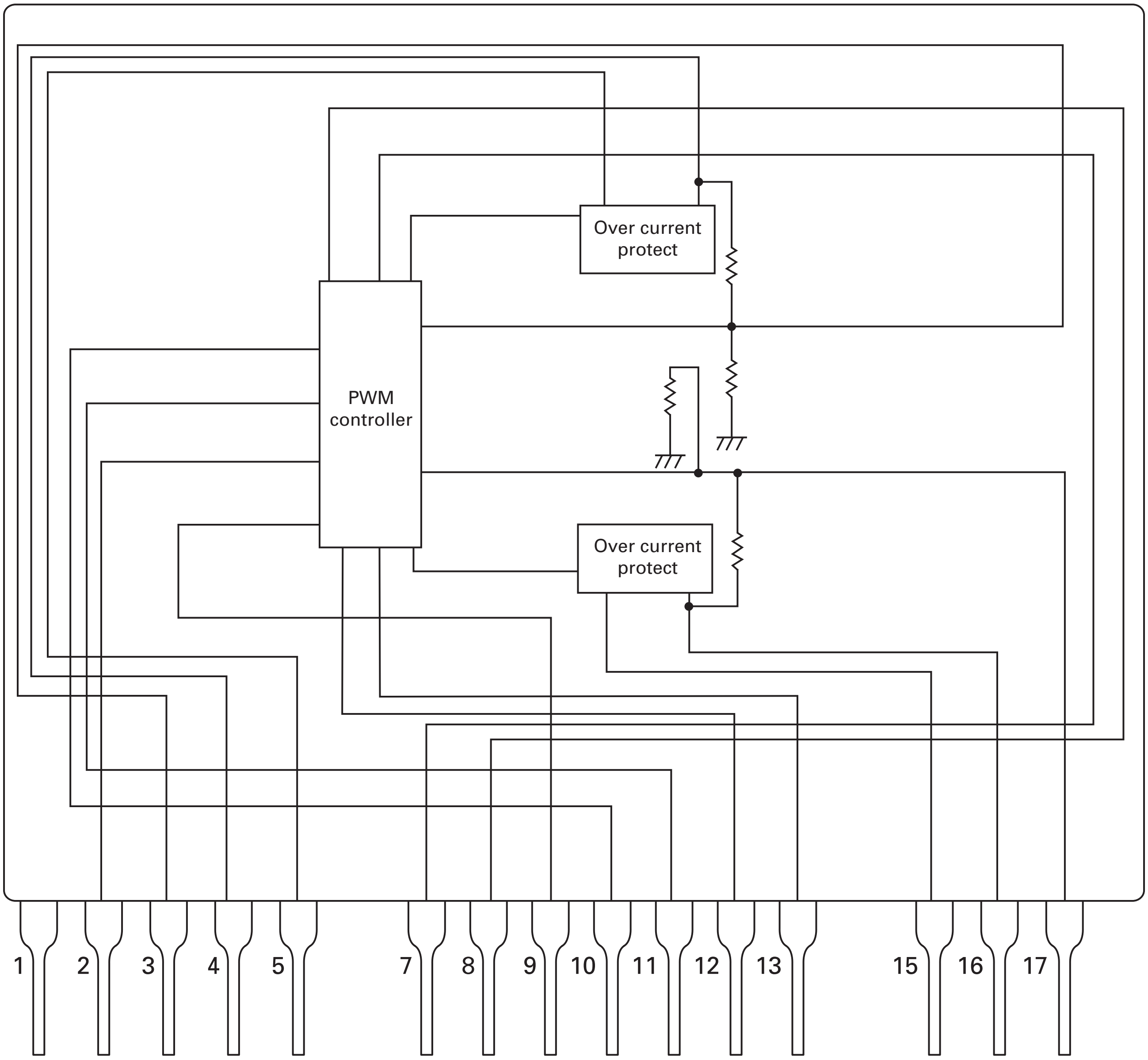
PAL007B


TAB 1
P-GND2 2
OUT2- 3 FL-
STBY 4
OUT2+ 5 FL+
VCC 6
OUT1- 7 FR-
P-GND1 8
OUT1+ 9 FR+
SVR 10
IN1 11 FRIN
IN2 12 FLIN
S-GND 13
IN4 14 RLIN
IN3 15 RRIN
AC-GND 16
OUT3+ 17 RR+
P-GND3 18
OUT3- 19 RR-
VCC 20
OUT4+ 21 RL+
MUTE 22
OUT4- 23 RL-
P-GND4 24
SWITCH 25 B.REMOTE
sw_vcc
Protector; Over voltage
Stand-by Circuit
amp_vcc
Reference
Offset Detection
Protector; Thermal
Offset Detection
Protector; Short circuit
amp_vcc
Offset Detection
Offset Detection
Protector; Over current limit
stby
sw_vcc
Mute circuit

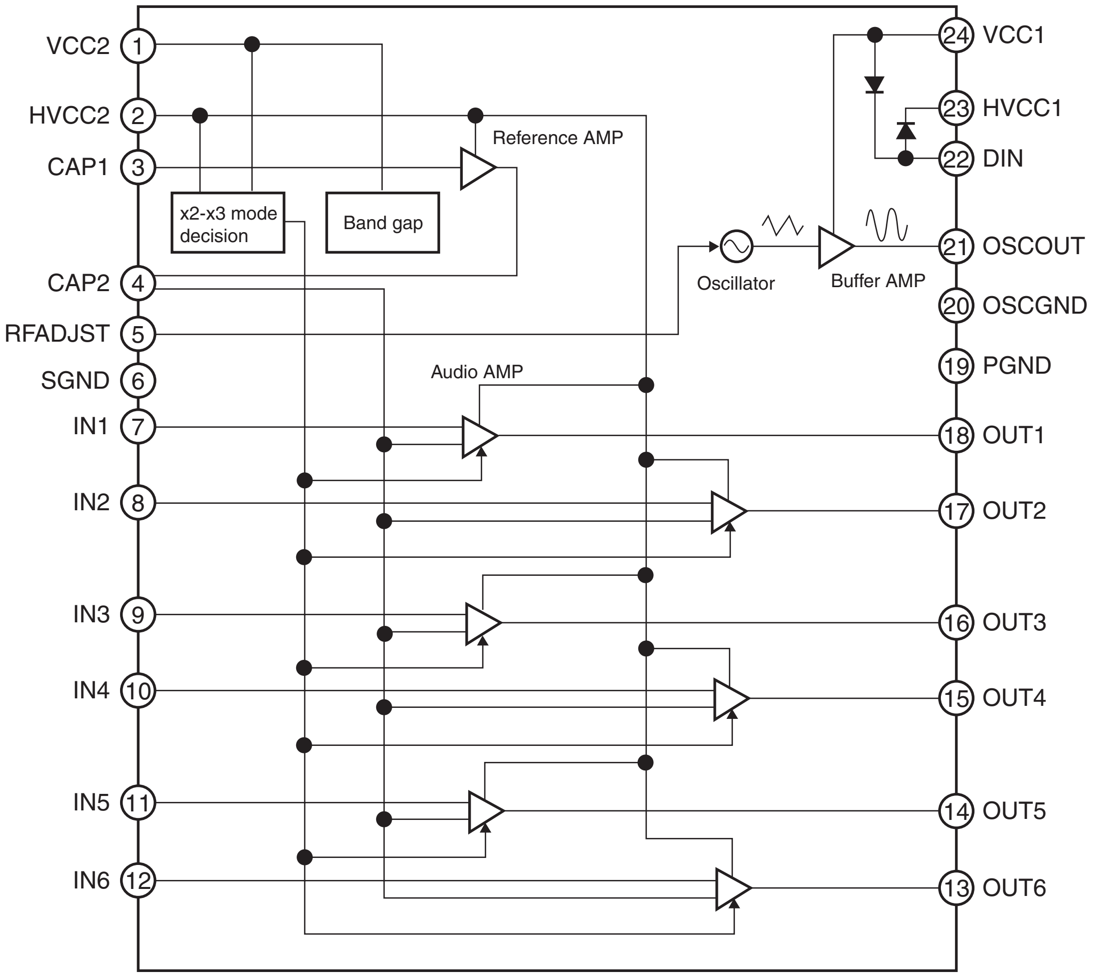
TC74VHC08FTS1


14 VCC
13 4B
12 4A
11 4Y
10 3B
9 3A
8 3Y
1 1A
2 1B
3 1Y
4 2A
5 2B
6 2Y
7 GND

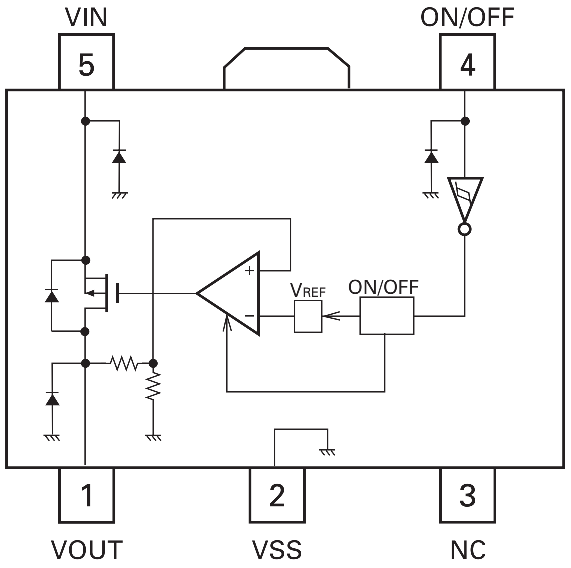
BP5451-1


Over current protect
PWM controller
Over current protect
1
2
3
4
5
7
8
9
10
11
12
13
15
16
17

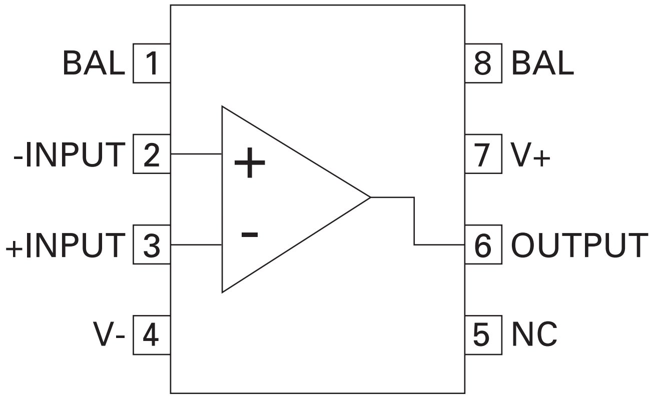
PA2028A1


VCC2 1
HVCC2 2
CAP1 3
CAP2 4
RFADJST 5
SGND 6
IN1 7
IN2 8
IN3 9
IN4 10
IN5 11
IN6 12
24 VCC1
23 HVCC1
22 DIN
21 OSCOUT
20 OSCGND
19 PGND
18 OUT1
17 OUT2
16 OUT3
15 OUT4
14 OUT5
13 OUT6
Reference AMP
x2-x3 mode decision
Band gap
Oscillator
Buffer AMP
Audio AMP

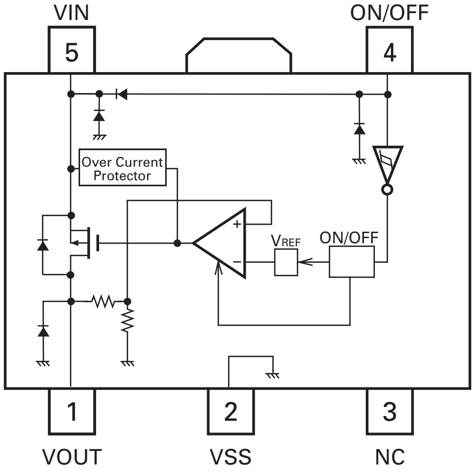
S-818A35AUC-BGP


VIN
5
ON/OFF
4
VREF
ON/OFF
1
2
3
VOUT
VSS
NC

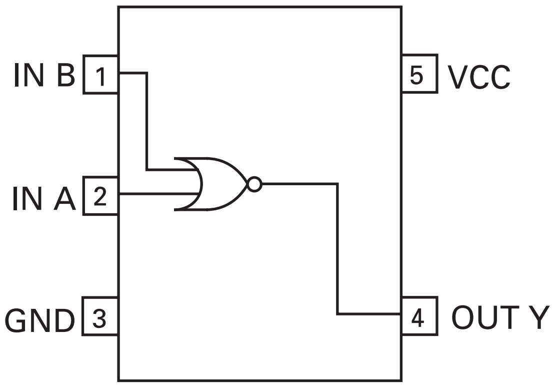
NJM2136V


BAL 1
-INPUT 2
+INPUT 3
V- 4
8 BAL
7 V+
6 OUTPUT
5 NC
+
-

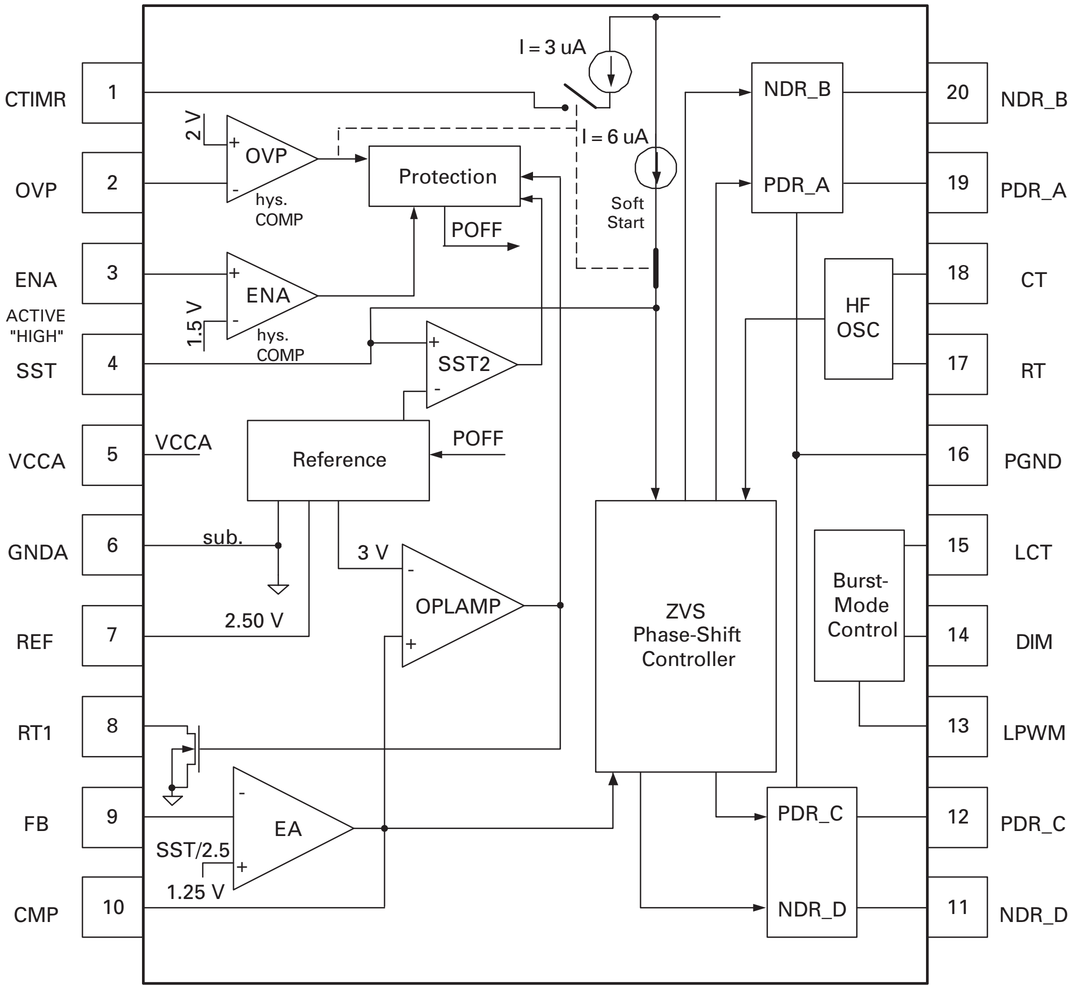
S-1131B25UC-N4K


VIN
5
ON/OFF
4
Over Current Protector
VREF
ON/OFF
1
VOUT
2
VSS
3
NC

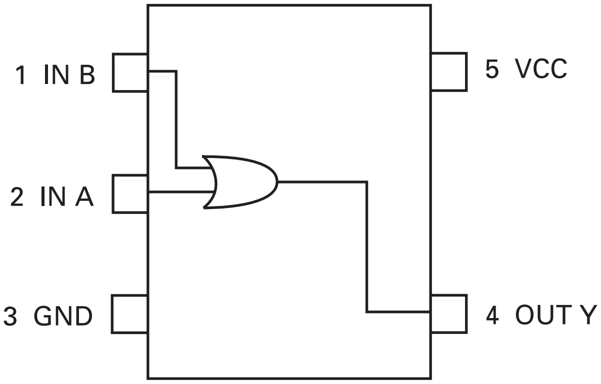
TC7SH02FUS1


IN B
1
IN A
2
GND
3
5
VCC
4
OUT Y

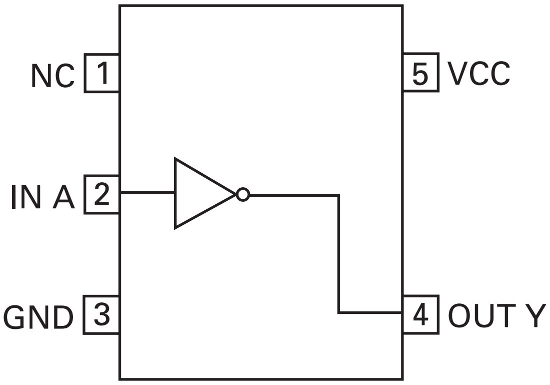
OZ961ISN


CTIMR
1
OVP
2
ENA
3
ACTIVE "HIGH"
SST
4
VCCA
5
GNDA
6
REF
7
RT1
8
FB
9
CMP
10
I = 3 uA
I = 6 uA
Soft Start
2 V
OVP
hys. COMP
Protection
POFF
ENA
1.5 V
hys. COMP
SST2
VCCA
Reference
POFF
sub.
2.50 V
3 V
OPLAMP
EA
SST/2.5
1.25 V
NDR_B
PDR_A
HF OSC
ZVS Phase-Shift Controller
Burst-Mode Control
PDR_C
NDR_D
20
NDR_B
19
PDR_A
18
CT
17
RT
16
PGND
15
LCT
14
DIM
13
LPWM
12
PDR_C
11
NDR_D

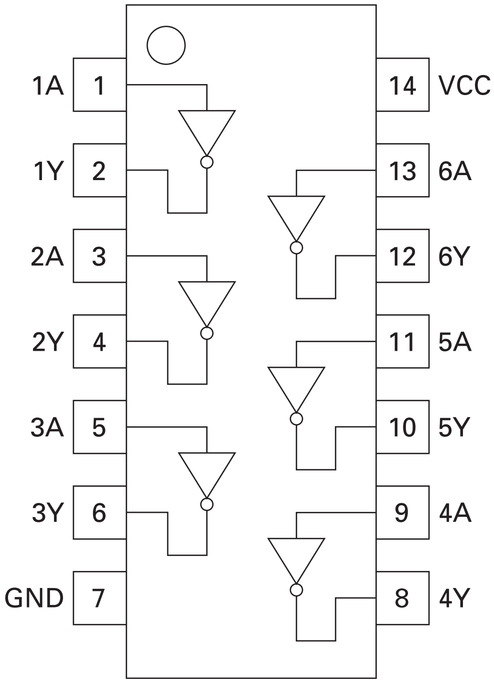
TC7SH32FUS1


1 IN B
2 IN A
3 GND
5 VCC
4 OUT Y

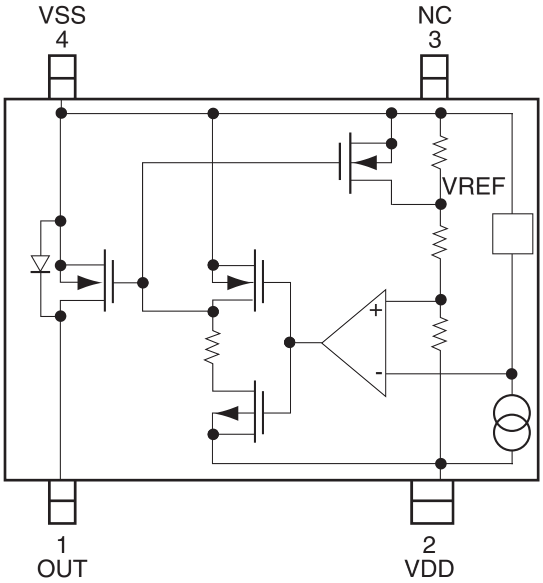
TC7SET04FUS1


NC 1
IN A 2
GND 3
5 VCC
4 OUT Y

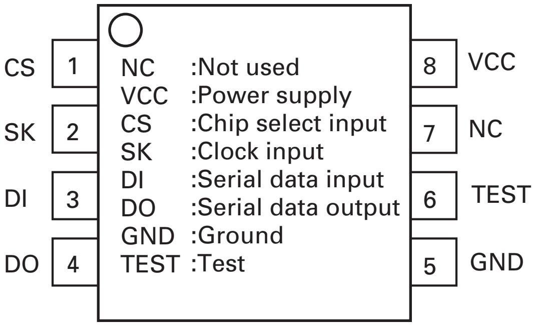
TC74VHC04FTS1


1A 1
1Y 2
2A 3
2Y 4
3A 5
3Y 6
GND 7
14 VCC
13 6A
12 6Y
11 5A
10 5Y
9 4A
8 4Y

S-80830CNNB-B8P

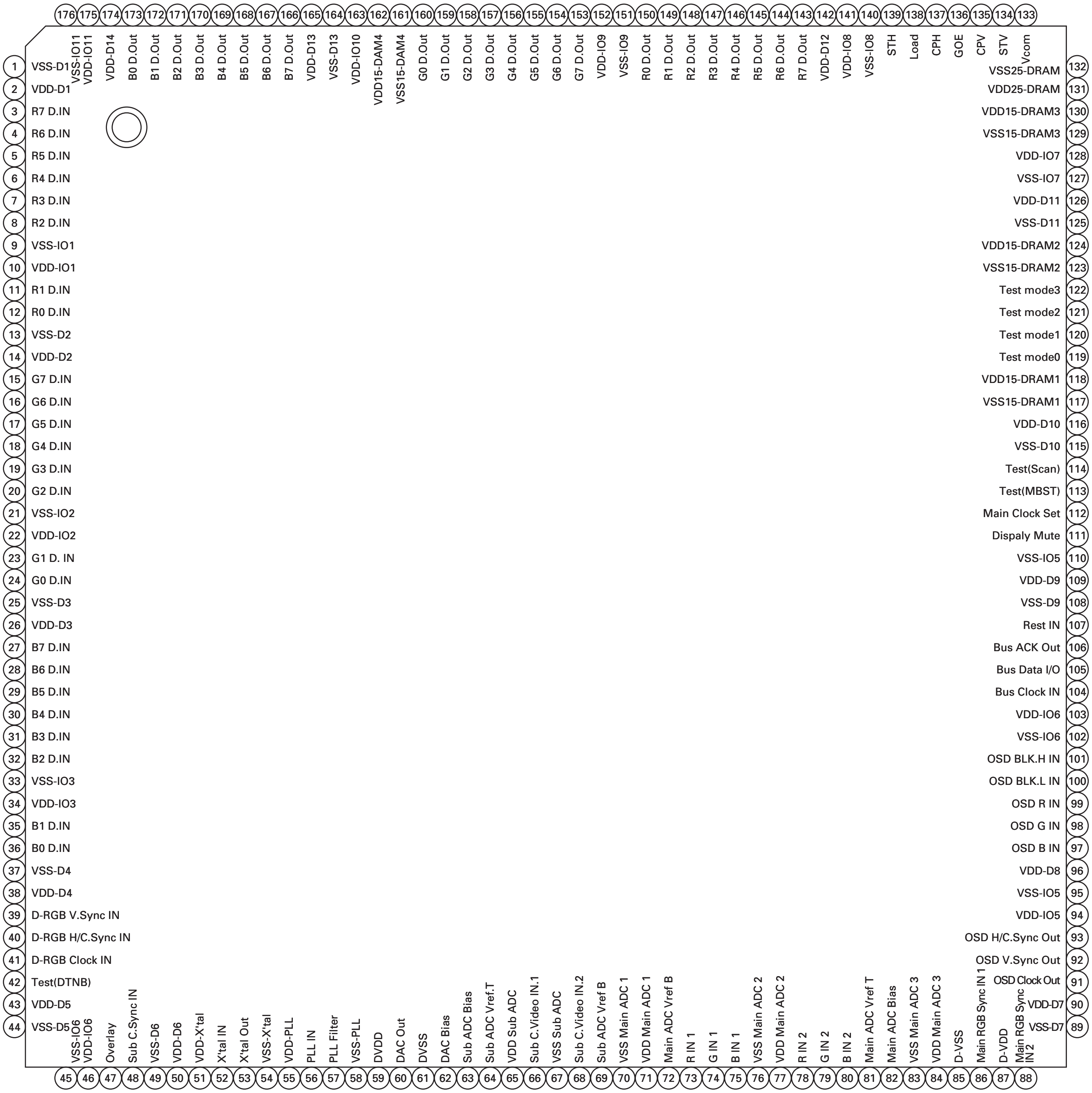

VSS
4
NC
3
VREF
+
-
1
OUT
2
VDD

S-93C66BD0I-J8

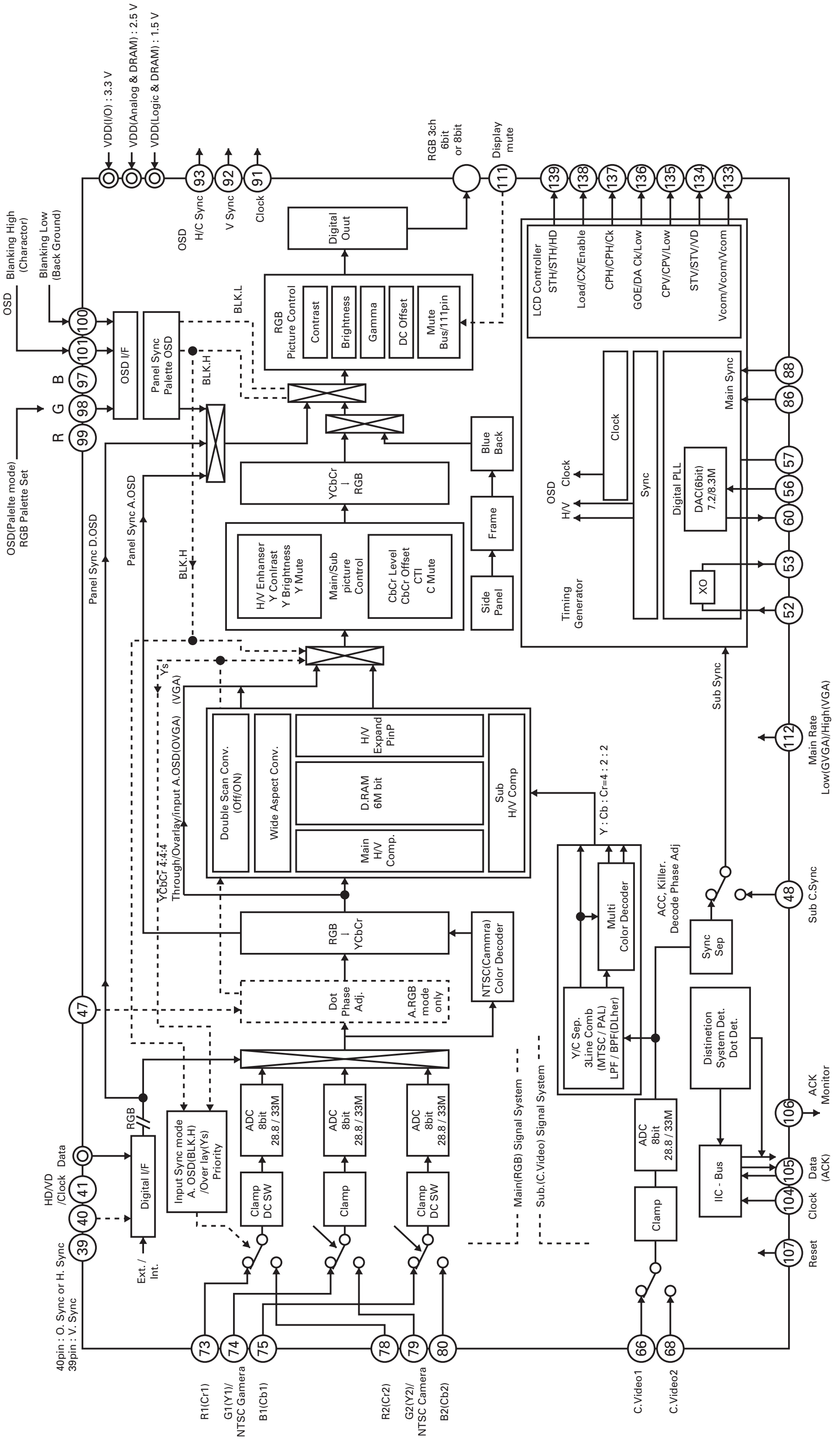

CS 1
SK 2
DI 3
DO 4
8 VCC
7 NC
6 TEST
5 GND
NC :Not used
VCC :Power supply
CS :Chip select input
SK :Clock input
DI :Serial data input
DO :Serial data output
GND :Ground
TEST :Test

TC90A96AFG-P

● Pin Layout


1 VSS-D1
2 VDD-D1
3 R7 D.IN
4 R6 D.IN
5 R5 D.IN
6 R4 D.IN
7 R3 D.IN
8 R2 D.IN
9 VSS-IO1
10 VDD-IO1
11 R1 D.IN
12 R0 D.IN
13 VSS-D2
14 VDD-D2
15 G7 D.IN
16 G6 D.IN
17 G5 D.IN
18 G4 D.IN
19 G3 D.IN
20 G2 D.IN
21 VSS-IO2
22 VDD-IO2
23 G1 D. IN
24 G0 D.IN
25 VSS-D3
26 VDD-D3
27 B7 D.IN
28 B6 D.IN
29 B5 D.IN
30 B4 D.IN
31 B3 D.IN
32 B2 D.IN
33 VSS-IO3
34 VDD-IO3
35 B1 D.IN
36 B0 D.IN
37 VSS-D4
38 VDD-D4
39 D-RGB V.Sync IN
40 D-RGB H/C.Sync IN
41 D-RGB Clock IN
42 Test(DTNB)
43 VDD-D5
44 VSS-D5
45 VSS-IO6
46 VDD-IO6
47 Overlay
48 Sub C.Sync IN
49 VSS-D6
50 VDD-D6
51 VDD-X'tal
52 X'tal IN
53 X'tal Out
54 VSS-X'tal
55 VDD-PLL
56 PLL IN
57 PLL Filter
58 VSS-PLL
59 DVDD
60 DAC Out
61 DVSS
62 DAC Bias
63 Sub ADC Bias
64 Sub ADC Vref.T
65 VDD Sub ADC
66 Sub C.Video IN.1
67 VSS Sub ADC
68 Sub C.Video IN.2
69 Sub ADC Vref B
70 VSS Main ADC 1
71 VDD Main ADC 1
72 Main ADC Vref B
73 R IN 1
74 G IN 1
75 B IN 1
76 VSS Main ADC 2
77 VDD Main ADC 2
78 R IN 2
79 G IN 2
80 B IN 2
81 Main ADC Vref T
82 Main ADC Bias
83 VSS Main ADC 3
84 VDD Main ADC 3
85 D-VSS
86 Main RGB Sync IN 1
87 D-VDD
88 Main RGB Sync IN 2
89 VSS-D7
90 VDD-D7
91 OSD Clock Out
92 OSD V.Sync Out
93 OSD H/C.Sync Out
94 VDD-IO5
95 VSS-IO5
96 VDD-D8
97 OSD B IN
98 OSD G IN
99 OSD R IN
100 OSD BLK.L IN
101 OSD BLK.H IN
102 VSS-IO6
103 VDD-IO6
104 Bus Clock IN
105 Bus Data I/O
106 Bus ACK Out
107 Rest IN
108 VSS-D9
109 VDD-D9
110 VSS-IO5
111 Dispaly Mute
112 Main Clock Set
113 Test(MBST)
114 Test(Scan)
115 VSS-D10
116 VDD-D10
117 VSS15-DRAM1
118 VDD15-DRAM1
119 Test mode0
120 Test mode1
121 Test mode2
122 Test mode3
123 VSS15-DRAM2
124 VDD15-DRAM2
125 VSS-D11
126 VDD-D11
127 VSS-IO7
128 VDD-IO7
129 VSS15-DRAM3
130 VDD15-DRAM3
131 VDD25-DRAM
132 VSS25-DRAM
133 Vcom
134 STV
135 CPV
136 GOE
137 CPH
138 Load
139 STH
140 VSS-IO8
141 VDD-IO8
142 VDD-D12
143 R7 D.Out
144 R6 D.Out
145 R5 D.Out
146 R4 D.Out
147 R3 D.Out
148 R2 D.Out
149 R1 D.Out
150 R0 D.Out
151 VSS-IO9
152 VDD-IO9
153 G7 D.Out
154 G6 D.Out
155 G5 D.Out
156 G4 D.Out
157 G3 D.Out
158 G2 D.Out
159 G1 D.Out
160 G0 D.Out
161 VSS15-DAM4
162 VDD15-DAM4
163 VDD-IO10
164 VSS-D13
165 VDD-D13
166 B7 D.Out
167 B6 D.Out
168 B5 D.Out
169 B4 D.Out
170 B3 D.Out
171 B2 D.Out
172 B1 D.Out
173 B0 D.Out
174 VDD-D14
175 VDD-IO11
176 VSS-IO11

Block Diagram

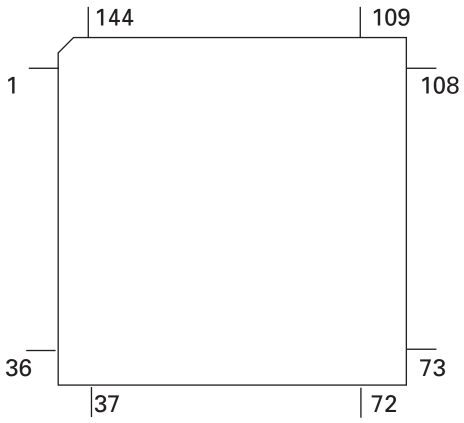

VDD(I/O) : 3.3 V
VDD(Analog & DRAM) : 2.5 V
VDD(Logic & DRAM) : 1.5 V
93
92
91
OSD H/C Sync
V Sync
Clock
RGB 3ch 6bit or 8bit
Display mute
111
139
138
137
136
135
134
133
Digital Ouut
RGB Picture Control
Contrast
Brightness
Gamma
DC Offset
Mute Bus/111pin
BLK.L
BLK.H
OSD
Blanking High (Charactor)
Blanking Low (Back Ground)
100
101
97
98
99
R
G
B
OSD I/F
Panel Sync Palette OSD
OSD(Palelte mode) RGB Palette Set
Panel Sync D.OSD
Panel Sync A.OSD
YCbCr → RGB
Blue Back
Frame
Side Panel
H/V Enhanser Y Conlrast Y Brightness Y Mute
Main/Sub picture Control
CbCr Level CbCr Offset CTI C Mute
LCD Controller
STH/STH/HD
Load/CX/Enable
CPH/CPH/Ck
GOE/DA Ck/Low
CPV/CPV/Low
STV/STV/VD
Vcom/Vcom/Vcom
Clock
Sync
Digital PLL
DAC(6bit) 7.2/8.3M
XO
OSD Clock
H/V
Timing Generator
Main Sync
88
86
57
56
60
53
52
Sub Sync
112
Main Rate Low(GVGA)/High(VGA)
Ys
YCbCr 4:4:4 Through/Overlay/input A.OSD(OVGA) (VGA)
Double Scan Conv. (Off/ON)
Wide Aspect Conv.
H/V Expand PinP
D.RAM 6M bit
Main H/V Comp.
Sub H/V Comp
Y : Cb : Cr=4 : 2 : 2
Multi Color Decoder
ACC, Killer, Decode Phase Adj
Sync Sep
48
Sub C.Sync
RGB → YCbCr
NTSC(Cammra) Color Decoder
Dot Phase Adj.
A.RGB mode only
47
Y/C Sep. 3Line Comb (MTSC / PAL) LPF / BPF(DLher)
Distineton System Det. Dot Det.
Main(RGB) Signal System
Sub.(C.Video) Signal System
RGB
Input Sync mode A. OSD(BLK.H) /Over lay(Ys) Priority
ADC 8bit 28.8 / 33M
Clamp DC SW
Clamp
Digital I/F
HD/VD /Clock
Data
39
40
41
Ext. / Int.
IIC - Bus
106
ACK Monitor
105
Data (ACK)
104
Clock
107
Reset
40pin : O. Sync or H. Sync
39pin : V. Sync
73
74
75
78
79
80
66
68
R1(Cr1)
G1(Y1)/ NTSC Camera
B1(Cb1)
R2(Cr2)
G2(Y2)/ NTSC Camera
B2(Cb2)
C.Video1
C.Video2

● Pin Functions(PE5536A)

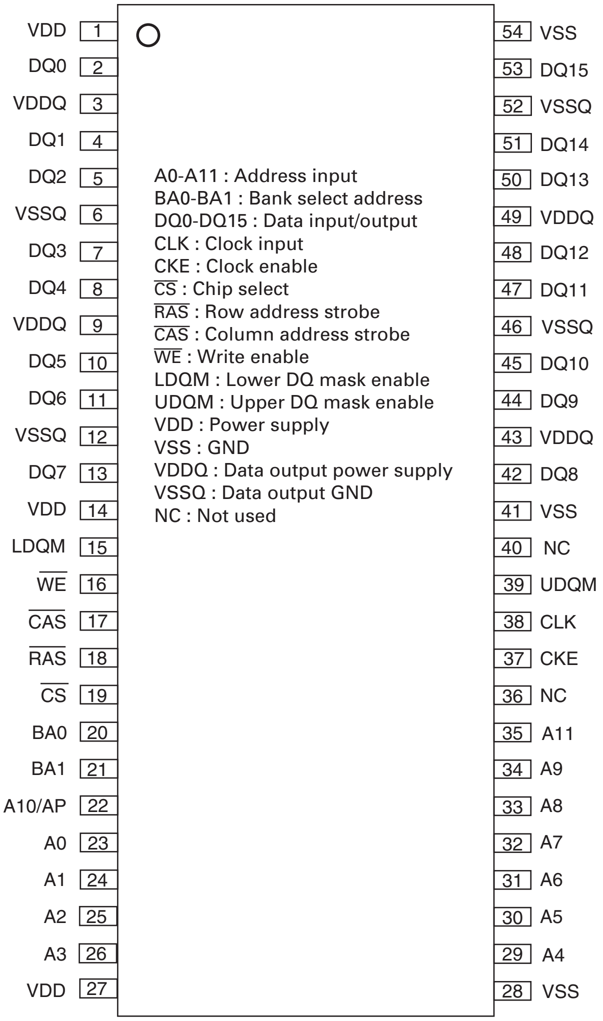
Pin No.	Pin Name	I/O	Function and Operation
1-7	D14-8	I/O	External ROM/RAM data bus input/output
8	EVDD		Power supply(3.3 V)
9	EVSS		GND
10-17	D7-0	I/O	External ROM/RAM data bus input/output
18	DIMMER	O	Dimmer pulse output
19	NC		Not used
20	MFLPW	O	TFT backlight output
21	MVIPW	O	Picture power supply control output
22	$\overline{\text{IRL}}$	I	GDC interrupt request input
23	VDD		Power supply(2.5 V)
24	VSS		GND
25	CLKSEL	O	Synchronous idle switch output
26	NC		Not used
27	REMOCON	I	Remote control input
28	TDO	O	Debug data output
29	TDI	I	Debug data input
30	$\overline{\text{STEST}}$	I	Monitor operation mode input
31	$\overline{\text{STEST2}}$	I	Touch panel test mode input
32	$\overline{\text{TRST}}$	I	Debug reset input
33	SELFOUT	O	Connect to GND
34	SELFMODE	I	Connect to GND
35	TMS	I	Debug mode select input
36	TCK	I	Debug clock input
37	EVDD		Power supply(3.3 V)
38	EVSS		GND
39	$\overline{\text{YS\_STOP}}$	O	Navigation disable output
40	TOP_OSD	O	Navigation/GDC display select output
41	$\overline{\text{PIPRES}}$	O	IC reset output
42	$\overline{\text{EPRTEST}}$	I	EEPROM data setting mode input
43	INVPUL	O	Inverter pulse output
44	TESTIN	I	Chip test mode detect input
45	PIPSCK	O	IC clock output
46	PIPSDA	I/O	IC data input/output
47	PNLVD	O	Touch panel power supply control output
48,49	NC		Not used
50	NSYNCSEL	O	NAVI-CSYNC synchronous mode select output
51	PNLXV	O	Hi output is carried out when X directions is detected
52	PNLYV	O	Hi output is carried out when Y directions is detected
53	TSCK		Test mode communication pin
54	DPDT	I	Data input to LCD micro computer
55	KYDT	O	Data output from LCD micro computer
56	CVDD		Power supply(3.3 V)
57	X2		Crystal oscillator connection pin
58	X1		Crystal oscillator connection pin
59	CVSS		GND
60	CKSEL		Connect to GND
61	PSEL		Connect to VDD
62	VDD		Power supply(2.5 V)
63	VSS		GND
64	MODE0		Operation mode specification terminal
65	MODE1		Operation mode specification terminal
66	$\overline{\text{RESET}}$	I	Reset input
67	AVDD1		D/A converter power supply(3.3 V)
68,69	NC		Not used
70	AVSS1		D/A converter GND
71	AVSS0		A/D converter GND
72	AVDD0		A/D converter power supply(3.3 V)
73	SPEANA	I	Spectrum analyzer AD input
74	TOUCHAD	I	Touch panel correction input
75-77	KDT2-0	I	Key data input
78	PNLADY	I	Y directions analog input
79	PNLADX	I	X directions analog input

Pin No.	Pin Name	I/O	Function and Operation
80	TEMPSEN	I	Temperature sense input
81	VDD		Power supply(2.5 V)
82	VSS		GND
83	DDCON_SEL	O	DD converter select output
84	NMI	I	NMI input
85	FSCWIDE	I	FSC drawing in range setting input
86	DACCLK	O	DAC CLK output
87	EPRCS	O	EEPROM chip select output
88	EPRCLK	O	EEPROM clock output
89	EPRDO	O	EEPROM data output
90	EPRDI	I	EEPROM data input
91	$\overline{\text{WAIT}}$	I	GDC wait input
92	GDCPW	O	GDC IC power supply output
93	$\overline{\text{GDCRES}}$	O	GDC IC reset output
94	$\overline{\text{VDDSENS}}$	I	Power supply sense input
95	$\overline{\text{RD}}$	O	External ROM/RAM read output
96	$\overline{\text{UWR}}$	O	External ROM/RAM write output(Upper)
97	$\overline{\text{LWR}}$	O	External ROM/RAM write output(Lower)
98	EVDD		Power supply(3.3 V)
99	EVSS		GND
100	$\overline{\text{EPRRST}}$	I	EEPROM data initialization mode input
101,102	SP2,1	O	Spectrum analyzer band select output
103	$\overline{\text{CS4}}$	O	External ROM 1 chip select output
104	$\overline{\text{CS3}}$	O	GDC SDRAM access output
105	SP0	O	Spectrum analyzer band select output
106	$\overline{\text{CS1}}$	O	GDC resistor access output
107	DACDI	O	DAC data output
108	DACLD	O	DAC data taking trigger output
109	ROMCS		Not used
110	ROMCK		Not used
111	ROMDATA		Not used
112	EVDD		Power supply(3.3 V)
113	EVSS		GND
114,115	A25,24		Not used
116	A23	O	External RAM address bus output
117-123	A22-16	O	External ROM/RAM address bus output
124	VDD		Power supply(2.5 V)
125	VSS		GND
126-133	A15-8	O	External ROM/RAM address bus output
134	EVDD		Power supply(3.3 V)
135	EVSS		GND
136-142	A7-1	O	External ROM/RAM address bus output
143	A0		Not used
144	D15	I/O	External ROM/RAM data bus input/output

PE5536A

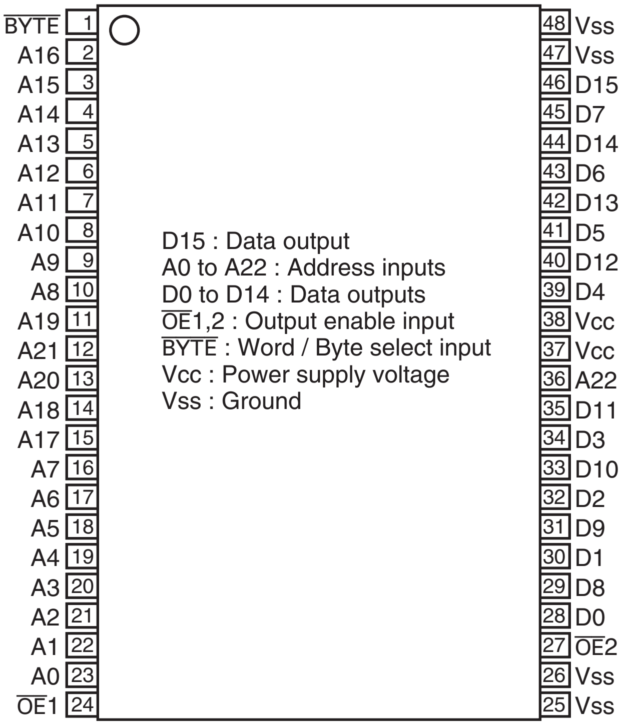


K4S641632K-UC75


VDD 1
DQ0 2
VDDQ 3
DQ1 4
DQ2 5
VSSQ 6
DQ3 7
DQ4 8
VDDQ 9
DQ5 10
DQ6 11
VSSQ 12
DQ7 13
VDD 14
LDQM 15
WE 16
CAS 17
RAS 18
CS 19
BA0 20
BA1 21
A10/AP 22
A0 23
A1 24
A2 25
A3 26
VDD 27
28 VSS
29 A4
30 A5
31 A6
32 A7
33 A8
34 A9
35 A11
36 NC
37 CKE
38 CLK
39 UDQM
40 NC
41 VSS
42 DQ8
43 VDDQ
44 DQ9
45 DQ10
46 VSSQ
47 DQ11
48 DQ12
49 VDDQ
50 DQ13
51 DQ14
52 VSSQ
53 DQ15
54 VSS

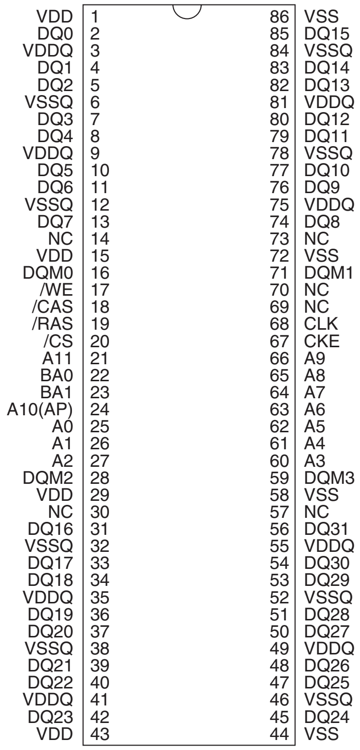
A0-A11 : Address input
BA0-BA1 : Bank select address
DQ0-DQ15 : Data input/output
CLK : Clock input
CKE : Clock enable
CS : Chip select
RAS : Row address strobe
CAS : Column address strobe
WE : Write enable
LDQM : Lower DQ mask enable
UDQM : Upper DQ mask enable
VDD : Power supply
VSS : GND
VDDQ : Data output power supply
VSSQ : Data output GND
NC : Not used

PD8165A


BYTE 1
A16 2
A15 3
A14 4
A13 5
A12 6
A11 7
A10 8
A9 9
A8 10
A19 11
A21 12
A20 13
A18 14
A17 15
A7 16
A6 17
A5 18
A4 19
A3 20
A2 21
A1 22
A0 23
OE1 24
25 Vss
26 Vss
27 OE2
28 D0
29 D8
30 D1
31 D9
32 D2
33 D10
34 D3
35 D11
36 A22
37 Vcc
38 Vcc
39 D4
40 D12
41 D5
42 D13
43 D6
44 D14
45 D7
46 D15
47 Vss
48 Vss

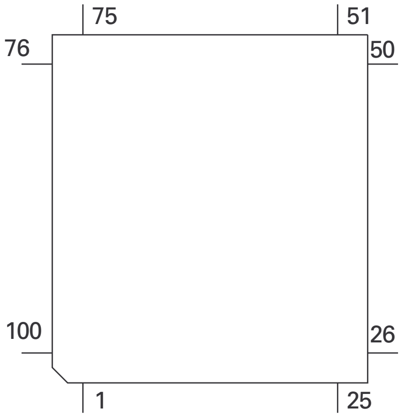
D15 : Data output
A0 to A22 : Address inputs
D0 to D14 : Data outputs
OE1,2 : Output enable input
BYTE : Word / Byte select input
Vcc : Power supply voltage
Vss : Ground

EDS1232AATA-75


VDD 1 86 VSS
DQ0 2 85 DQ15
VDDQ 3 84 VSSQ
DQ1 4 83 DQ14
DQ2 5 82 DQ13
VSSQ 6 81 VDDQ
DQ3 7 80 DQ12
DQ4 8 79 DQ11
VDDQ 9 78 VSSQ
DQ5 10 77 DQ10
DQ6 11 76 DQ9
VSSQ 12 75 VDDQ
DQ7 13 74 DQ8
NC 14 73 NC
VDD 15 72 VSS
DQM0 16 71 DQM1
/WE 17 70 NC
/CAS 18 69 NC
/RAS 19 68 CLK
/CS 20 67 CKE
A11 21 66 A9
BA0 22 65 A8
BA1 23 64 A7
A10(AP) 24 63 A6
A0 25 62 A5
A1 26 61 A4
A2 27 60 A3
DQM2 28 59 DQM3
VDD 29 58 VSS
NC 30 57 NC
DQ16 31 56 DQ31
VSSQ 32 55 VDDQ
DQ17 33 54 DQ30
DQ18 34 53 DQ29
VDDQ 35 52 VSSQ
DQ19 36 51 DQ28
DQ20 37 50 DQ27
VSSQ 38 49 VDDQ
DQ21 39 48 DQ26
DQ22 40 47 DQ25
VDDQ 41 46 VSSQ
DQ23 42 45 DQ24
VDD 43 44 VSS

A0 to A11	Address Inputs	DQM0 to DQM3	DQ mask anable
BA0,BA1	Bank select	CKE	Clock enable
DQ0 to DQ31	Data Input/output	CLK	Clock Input
/CS	Chip select	VDD	Supply voltage
/RAS	Row address atrobe	VSS	Ground
/CAS	Column address strobe	VDDQ	Supply voliage for DQ
/WE	Write enable	VSSQ	Ground for DQ
		NC	No connection

PE5555A


75
51
76
50
100
26
1
25

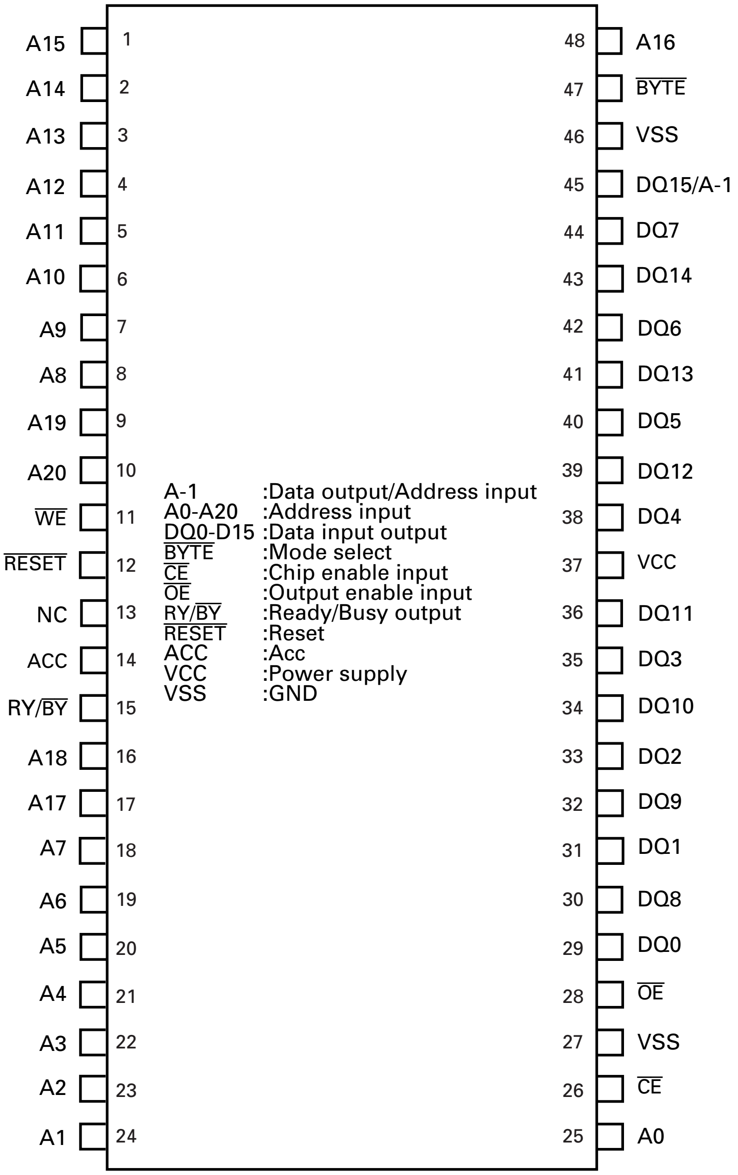
Format	Meaning
C	CMOS
N	Nch open drain

● Pin Functions(PE5555A)

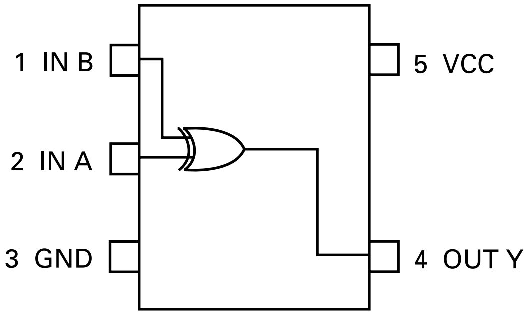
Pin No.	Pin Name	I/O	Format	Function and Operation
1	AVREF0	O		A/D converter reference voltage
2	AVSS			A power supply GND
3	SD	O		CRG drive output(controlled by claw)
4	NC			(Cannot used exept D/A)
5	AVREF1		C	Not used
6	CAMVOL	O	C	Switching CAM motor driver output voltage
7	E/LVOL1	O		Switching 1 ELV/LOAD motor driver output
8	VPP/IC			IC: Connected to VSS directry/ VPP:Pull-down
9	VDD			Positive power supply (5 V) pin
10	REGC			Connected to the capacity stabilizing output of the regulator (4.7 μF electric capacitor)
11	VSS			GND
12	X1			Connected to the oscillator for main-clock
13	X2			Connected to the oscillator for main-clock
14	/RESET	I		Mechanism microcomputer reset signal
15	XT1	I		Connected to the oscillator for sub-clock (connected to VSS via the resistor)
16	XT2			Connected to the oscillator for sub-clock (Open)
17	PULLDOWN	I		Connected to EVDD or EVSS via the resistor
18	/BRST	O		(Reserve: P-BUS reset)
19	/CDSTBY	O		(Reserve: IIC-BUS reset)
20	IRQPWR			Interruption to the reduced voltage
21	WAKEUP			Interruption to rise up the detection of DVD/CD DISC insert
22	BSI	I		(Reserve: P-BUS serial-data input)
23	BSO	O		(Reserve: P-BUS serial-data output)
24	BSCK	I/O	C	(Reserve: P-BUS serial-data input/output
25	TXDO	O		HOST(PC) UART data output/for flash rewriting (transmitted signal)
26	RXDO	I	C	HOST(PC) UART data input/for flash rewriting (received signal)
27	(BRXEN)	O	C	(Reserva: P-BUS possible to receive signal)
28	(/BSRQ)	O	C	(Reserve: P-BUS demand for service request)
29	(/CDSRQ)	O	C	(Reserve: IIC-BUS demand for request)
30	E/LVOL2	O	N	Switching 2 ELV/LOAD motor driver output
31,32	NC			Not used
33	EVSS			E power supply GND
34	EVDD		N	E power supply positive power supply
35	(SDA)	O	N	(Reserve: IIC-BUS data)
36	(SCL)	O		(Reserve: IIC-BUS clock)
37	(COREPWR)	O	C	Not used
38	XRES_M	O	C	DVD microcomputer reset signal (L: RESET)
39	IRQPWR_M	O		Notice to reduce the voltage of DVD microcomputer
40	NC		C	Not used
41	E/LFWD	O	C	ELV/LOAD motor control output 2 (FWD)
42	E/LREV	O	C	ELV/LOAD motor control output 1 (REV)
43	TXD1	O		DVD UART data output
44	RXD1	I		DVD UART data input
45	NC		C	Not used
46	CRGCONT	O		Output of the switching to servo driver control (H: acquirement)
47	DCONT2	O		(Reserve: servo driver output ON/OFF control (H: ON)
48	ROM1K	I	C	EEPROM switching to input 2k(L)/1k
49	VDCONT	O	/C	VD power supply control output
50	ROMDATA	I/O		E2PROM data input/output

Pin No.	Pin Name	I/O	Format	Function and Operation
51	ROMCS	O	C	E2PROM chip selection output
52	ROMCK	O	C	E2PROM clock output
53	/EPCS	I		E2PROM input(L)/no input & (E2PROM chip selection (output))
54	/TESTIN	I		Chip check test program starting up input
55	/DBBUGIN	I		Detection on-board debugger
56	NC			Not used
57	LOADSWL	I		LOAD operation sense L (DISC shape detecting, LOAD completed)
58	LOADSWR	I		LOAD operation sense R (DISC shape detecting, LOAD completed)
59	CONT_A	O	C	DVD/CD power supply control A pin
60	CONT_B	O	C	DVD/CD power supply control B pin
61	XAVCHK_ENT	I		AV check entry
62	XUCHK_ENT	I		Unit check entry
63-65	NC			(Reserve: DVD IN Port)
66	SPD_SW1	I		SW1 to set the speed of HOST (PC) UART
67	SPD_SW2	I		SW2 to set the speed of HOST (PC) UART
68	NC			Not used
69	BVSS			B power supply GND
70	BVDD			B power supply positive power supply (3.3 V)
71	HMCKENA	O	C	Master clock output control for CD
72	FSSW1	O	C	SW1 switching fs CG
73	FSSW2	O	C	SW2 switching fs CG
74	DTR	O	C	PC connected DTR
75	EMPH	O	C	Emphasis ON/OFF
76	CD_DVD	O	C	Switching CD/DVD (PLL LOCK detection)
77	CONT	O	C	ACT driver mute
78	OEIC	O	C	Switching gain of pick-up OEIC
79	BMUTE	O	C	BMUTE output
80	AMUTE	O	C	Last stage of audio Mute
81	NC		C	(AVREF_SW)
82	RIPP	O	C	Port for CDDA ripping
83	RIP_P_HEAD	O	C	Detection the interval of music (eqivalent to ripping) H: normal/L: detecting the interval
84,85	NC		C	(Reserve: DVD OUT Port)
86	REV	O	C	Not used
87	INISW	I		Disc/no disc sense input when initializing
88	/SVCONT	O	C	Switching the reference voltage
89	CAMREV	O	C	CAM motor control output 1 (REV)
90	CAMFWD	O	C	CAM motor control output 2 (FWD)
91	HOME	I		HOME SW sense input
92	CLAMP	I		CLAMP SW sense input
93	TEMP	I		Temperature information sense input (Reserve)
94	CAMSNS			CAM position select input (linear position)
95	CAMREF			Reference voltage for CAM sense
96	ELVSNS	I		ELV position select input (linear position)
97	ELVREF			Reference voltage for ELV sense
98	LOADPHT			LOAD operation photo sense (no DISC, starting LOAD)
99	VDSENS	I		VD power supply shorted air/ground sense input
100	VHALF	I		Servo driver center voltage input

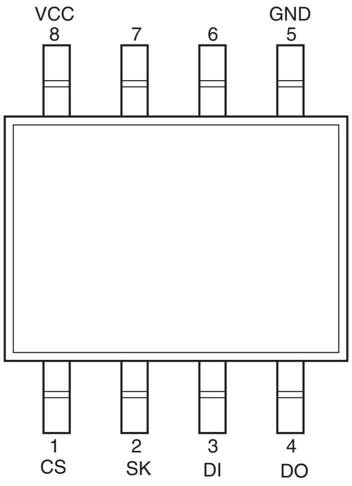
PD6541B


A15 1
A14 2
A13 3
A12 4
A11 5
A10 6
A9 7
A8 8
A19 9
A20 10
$\overline{WE}$ 11
$\overline{RESET}$ 12
NC 13
ACC 14
RY/$\overline{BY}$ 15
A18 16
A17 17
A7 18
A6 19
A5 20
A4 21
A3 22
A2 23
A1 24
48 A16
47 $\overline{BYTE}$
46 VSS
45 DQ15/A-1
44 DQ7
43 DQ14
42 DQ6
41 DQ13
40 DQ5
39 DQ12
38 DQ4
37 VCC
36 DQ11
35 DQ3
34 DQ10
33 DQ2
32 DQ9
31 DQ1
30 DQ8
29 DQ0
28 $\overline{OE}$
27 VSS
26 $\overline{CE}$
25 A0
A-1 :Data output/Address input
A0-A20 :Address input
DQ0-D15 :Data input output
$\overline{BYTE}$:Mode select
$\overline{CE}$:Chip enable input
$\overline{OE}$:Output enable input
RY/$\overline{BY}$:Ready/Busy output
$\overline{RESET}$:Reset
ACC :Acc
VCC :Power supply
VSS :GND

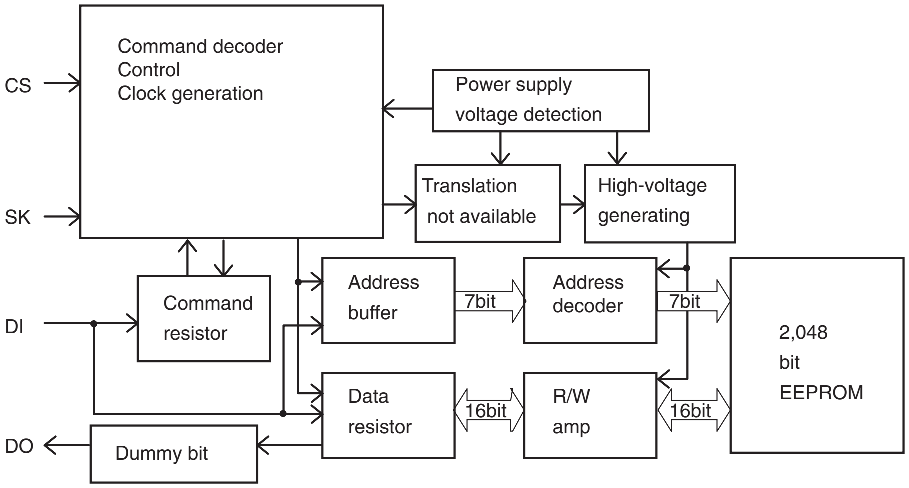
TC7SH86FUS1


1 IN B
2 IN A
3 GND
5 VCC
4 OUT Y

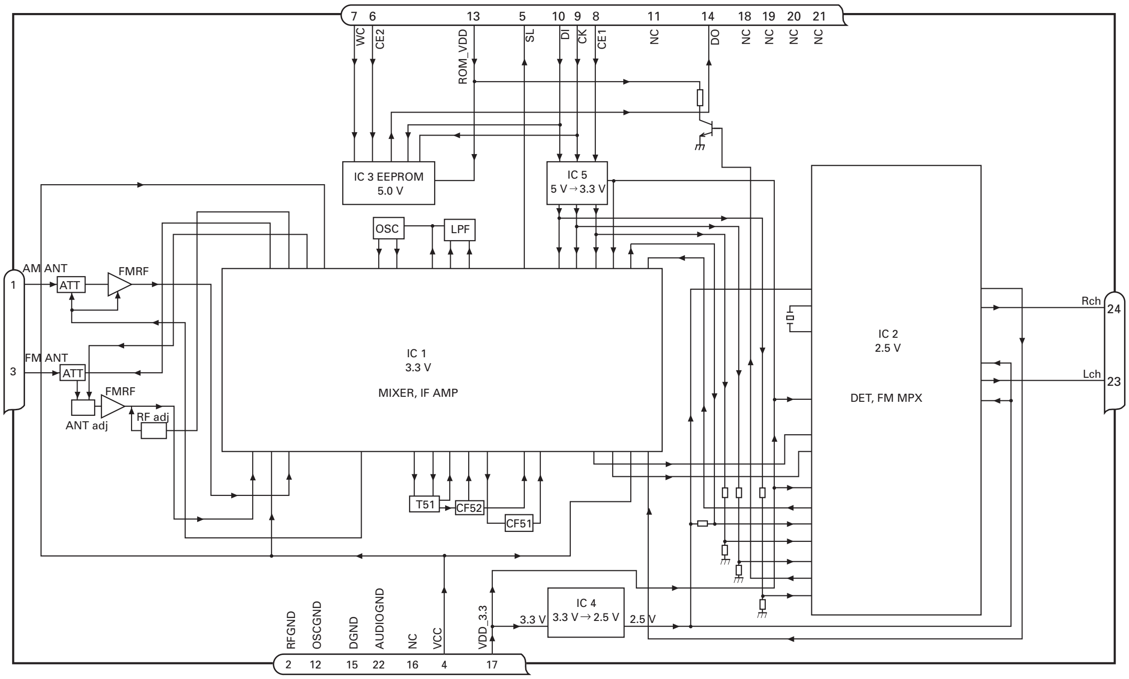
BR93L56RFVM-W


VCC
8
7
6
GND
5
1
CS
2
SK
3
DI
4
DO

● Block Diagram

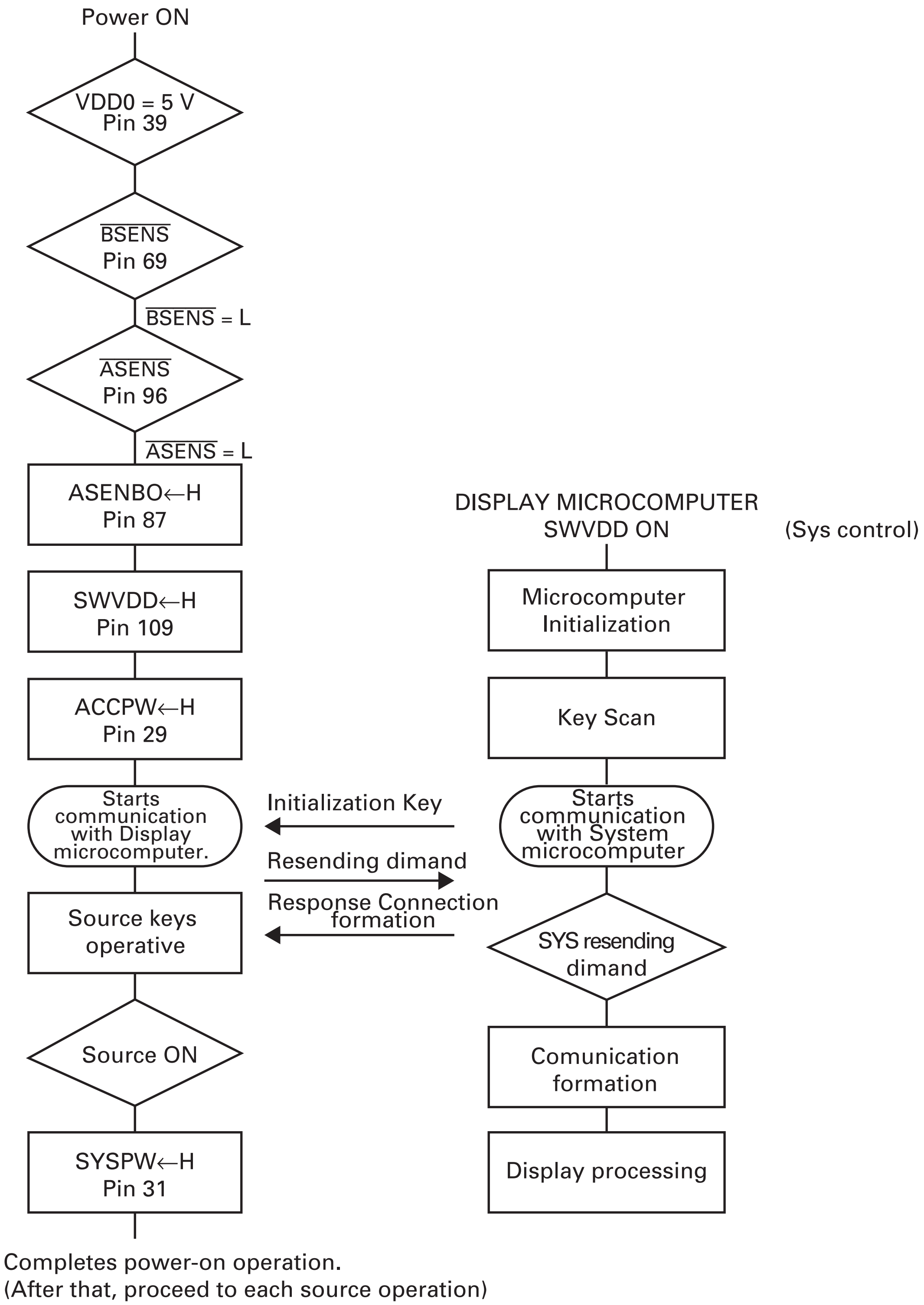

CS
SK
DI
DO
Command decoder
Control
Clock generation
Power supply
voltage detection
Translation
not available
High-voltage
generating
Command
resistor
Address
buffer
7bit
Address
decoder
7bit
2,048
bit
EEPROM
Data
resistor
16bit
R/W
amp
16bit
Dummy bit

● FM/AM Tuner Unit

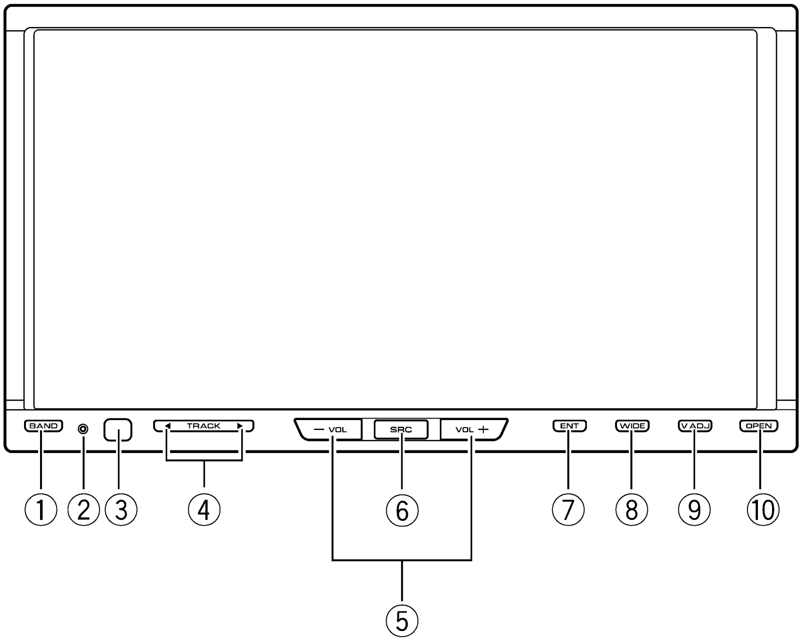

7 6 13 5 10 9 8 11 14 18 19 20 21
WC
CE2
ROM_VDD
SL
DI
CK
CE1
NC
DO
NC
NC
NC
NC
IC 3 EEPROM 5.0 V
IC 5 5 V→3.3 V
OSC
LPF
AM ANT
FMRF
ATT
FM ANT
ATT
FMRF
ANT adj
RF adj
IC 1 3.3 V MIXER, IF AMP
IC 2 2.5 V DET, FM MPX
Rch 24
Lch 23
T51
CF52
CF51
IC 4 3.3 V→2.5 V
3.3 V
2.5 V
RFGND
OSCGND
DGND
AUDIOGND
NC
VCC
VDD_3.3
2 12 15 22 16 4 17
1
3

No.	Symbol	I/O	Explain	
1	AMANT	I	AM antenna input	AM antenna input high impedance AMANT pin is connected with an all antenna by way of 4.7 µH. (LAU type inductor) A series circuit including an inductor and a resistor is connected with RF ground for the countermeasure against the hum of power transmission line.
2	RFGND		RF ground	Ground of antenna block
3	FMANT	I	FM antenna input	Input of FM antenna 75 Ω Surge absorber(DSP-201M-S00B) is necessary.
4	VCC		power supply	The power supply for analog block. D.C 8.4 V ± 0.3 V
5	SL	O	signal level	Output of FM/AM signals level
6	CE2	I	chip enable-2	Chip enable for EEPROM ″Low″ active
7	WC	I	write control	You can write EEPROM, when EEPROM write control is “Low”. Ordinary non connection
8	CE1	I	chip enable-1	Chip enable for AF•RF ″High″ active
9	CK	I	clock	Clock
10	DI	I	data in	Data input
11	NC		non connection	Not used
12	OSCGND		osc ground	Ground of oscillator block
13	ROM_VDD		power supply	Power supply for EEPROM pin 13 is connected with a power supply of micro computer.
14	DO	O	data out	Data output
15	DGND		digital ground	Ground of digital block
16	NC		non connection	Not used
17	VDD_3.3		power supply	The power supply for digital block. 3.3 V ± 0.2 V
18	NC		non connection	Not used
19	NC		non connection	Not used
20	NC		non connection	Not used
21	NC		non connection	Not used
22	AUDIOGND		audio ground	Ground of audio block
23	L ch	O	L channel output	FM stereo “L-ch” signal output or AM audio output
24	R ch	O	R channel output	FM stereo “R-ch” signal output or AM audio output

7.3 OPERATIONAL FLOW CHART


Power ON
VDD0 = 5 V
Pin 39
BSENS
Pin 69
BSENS = L
ASENS
Pin 96
ASENS = L
ASENBO←H
Pin 87
SWVDD←H
Pin 109
ACCPW←H
Pin 29
Starts communication with Display microcomputer.
Source keys operative
Source ON
SYSPW←H
Pin 31
Completes power-on operation.
(After that, proceed to each source operation)
DISPLAY MICROCOMPUTER
SWVDD ON
(Sys control)
Microcomputer Initialization
Key Scan
Starts communication with System microcomputer
SYS resending dimand
Comunication formation
Display processing
Initialization Key
Resending dimand
Response Connection formation

8. OPERATIONS



Head unit

① **BAND button**

Press to select among three FM bands and one AM band and to cancel the control mode of functions.

② **RESET button**

Press to return to the factory settings (initial settings).

③ **Signal receptor**

Receives signals from a remote control.

④ **◄/► buttons**

Press to do manual seek tuning, fast forward, reverse and track search controls.

⑤ **VOLUME**

Press to increase or decrease the volume.

⑥ **SOURCE button**

This unit is turned on by selecting a source. Press to cycle through all the available sources.

⑦ **ENTERTAINMENT (ENT) button**

Press to display the entertainment menu.

⑧ **WIDE button**

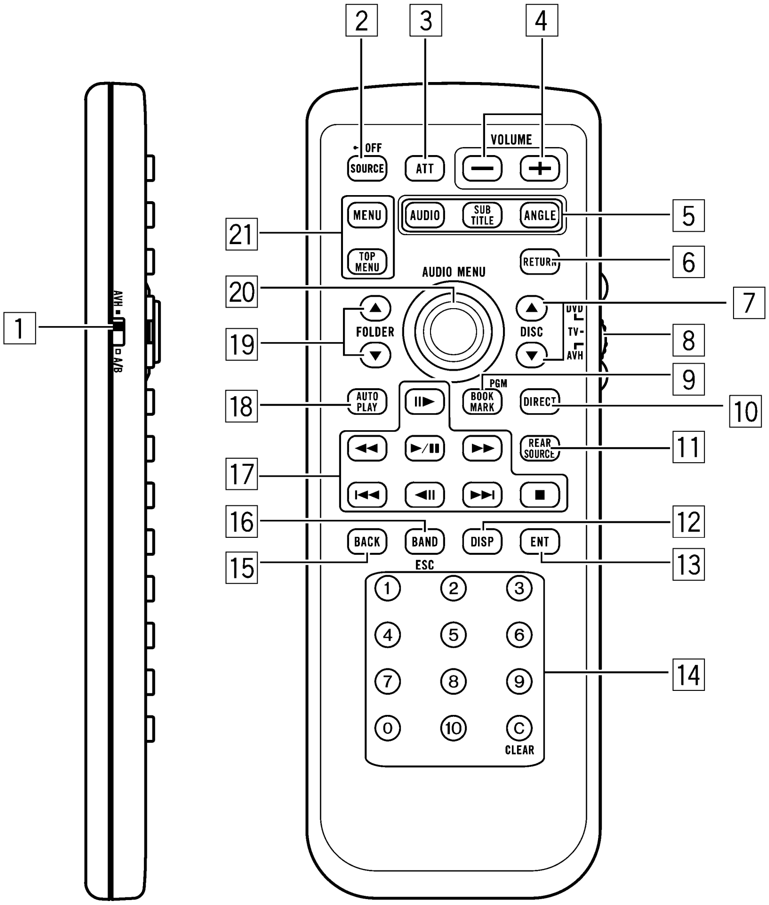
Press to select a desired mode for enlarging a 4:3 picture to a 16:9 one.

⑨ **V.ADJ button**

Press and hold to display the picture adjustment menu.

⑩ **OPEN button**

Press to slide down or up the LCD panel. ▣


2
3
4
OFF
SOURCE
ATT
VOLUME
MENU
TOP MENU
AUDIO
SUB TITLE
ANGLE
RETURN
AUDIO MENU
FOLDER
DISC
DVD
TV
AVH
PGM
AUTO PLAY
BOOK MARK
DIRECT
REAR SOURCE
BACK
BAND
ESC
DISP
ENT
1 2 3 4 5 6 7 8 9 0 10 C
CLEAR
AVH
A/B
1
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21

Remote control

	Button names	AVH mode	DVD mode with remote control code AVH
1	Remote control selection switch	Switch to change the setting of the remote control.	
2	**SOURCE** button	Press to cycle through all the available sources. Press and hold to turn the source off.	
3	**ATT** button	Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level.	
4	**VOLUME** buttons	Press to increase or decrease the volume.	
5	**AUDIO** button	Press to change the audio language during DVD playback.	
	SUB TITLE button	Press to change the subtitle language during DVD playback.	
	ANGLE button	Press to change the viewing angle during DVD playback.	
6	**RETURN** button	Press to display the PBC (playback control) menu during PBC playback.	

	Button names	AVH mode	DVD mode with remote control code AVH
7	▲/▼ button (**DISC**)	Press to select the next/previous disc.	
8	Remote control operation mode switch	Switch the operation mode between **AVH**, **DVD** and **TV** modes. Normally, set to **AVH**.	
9	**BOOKMARK** button/**PGM** button	Press to operate the preprogrammed functions for each source.	Press to turn the bookmark function on or off.
10	**DIRECT** button	Press to do direct XM/SIRIUS channel select.	Not used.
11	**REAR.S** button	Not used.	
12	**DISPLAY** button	Press to select different displays.	Not used.
13	**ENTERTAINMENT (ENT)** button	Press to display the entertainment menu.	Not used.
14	**0–10** buttons, **CLEAR** button	Press **0–10** to input numbers. Buttons **1–6** can operate the preset tuning for the tuner or disc changing for DVD player or multi-CD player. Press **CLEAR** to clear the input numbers.	Press to select a menu on the DVD top menu.
15	**BACK** button	Press to return to the previous display.	Not used.
16	**BAND** button	Press to select among three FM bands and one AM band and to cancel the control mode of functions. Press to switch mode between MP3/WMA and audio data (CD-DA) when playing discs with MP3/WMA and audio data (CD-DA) such as CD-EXTRA and MIXED-MODE CDs.	Press to switch mode between MP3/WMA and audio data (CD-DA) when playing discs with MP3/WMA and audio data (CD-DA) such as CD-EXTRA and MIXED-MODE CDs.
17	**PLAY/PAUSE** (►/❚❚) button	Press to switch sequentially between playback and pause.	
	REVERSE (◄◄) button	Press to perform fast reverse.	
	FORWARD (►►) button	Press to perform fast forward.	
	PREVIOUS (❙◄◄) button	Press to return to the previous track (chapter).	
	NEXT (►►❙) button	Press to go to the next track (chapter).	
	STEP (❙❙►/◄❙❙) button	Press to move ahead one frame at a time during DVD/VideoCD playback. Press and hold for one second to activate slow playback.	
	STOP (■) button	Press to stop playback.	

	Button names	AVH mode	DVD mode with remote control code AVH
18	**AUTO PLAY** button	Press to turn the DVD auto-playback function on or off.	
19	▲/▼ button (**FOLDER**)	Press to select the next/previous folder.	
20	Joystick	Move to do fast forward, reverse and track search controls. Click to recall **MENU**.	Move to select a menu on the DVD menu.
21	**MENU** button	Press to display the DVD menu during DVD playback.	
	TOP MENU (TOP.M) button	Press to return to the top menu during DVD playback.	

Using the remote control operation mode switch

There are three remote control operation modes on the remote control.

AVH mode operation

When operating this unit by remote control, the mode is normally switched to **AVH**.

- The joystick on the remote control can perform the same operations as the one on the head unit. Furthermore, the joystick can perform the same operations as the touch panel keys ▲, ▼, ◄ and ►.
- **1–6** can perform the same operations as the preset tuning keys **P1—P6** and the disc selection keys **01–06**.
  — If you want to select a disc located at 7 to 12 by using buttons **1–6**, press and hold the corresponding numbers, such as **1** for disc 7, until the disc number appears in the display.

DVD mode operation

If you switch the mode to **DVD**, the joystick and **0–10** operations are changed for DVD player.

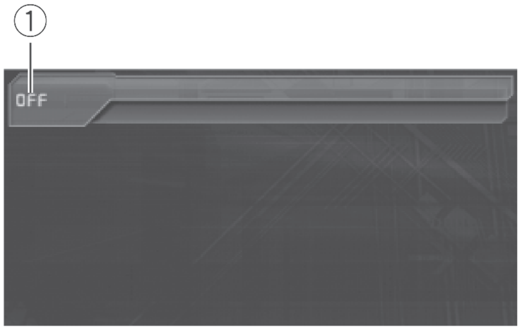
● **When you want to operate the following functions, switch the mode to DVD:**
- When operating the DVD menu by using the joystick.
- When operating the PBC menu by using **0–10**.
- When specifying title by using **0–10**.

TV mode operation

TV operations available with a Pioneer TV tuner (e.g. GEX-P5700) can be controled with **AVH** mode. **TV** mode is not used with this unit.

- For details concerning operation, refer to the TV tuner’s operation manuals. ■

Turning the unit on and selecting a source



① **Source icon**
Shows which source has been selected.

You can select a source you want to listen to. To switch to the DVD player, load a disc in the unit to switch to **DVD-V**.

● When using the touch panel keys, touch the source icon and then touch the desired source name.

The source names are displayed and selectable ones are highlighted.

- **DISC 1** – Built-in DVD player disc 1
- **DISC 2** – Built-in DVD player disc 2
- **DISC 3** – Built-in DVD player disc 3
- **DISC 4** – Built-in DVD player disc 4
- **DISC 5** – Built-in DVD player disc 5
- **DISC 6** – Built-in DVD player disc 6
- **TUNER** – Tuner
- **TV** – Television
- **iPod** – iPod
- **AUX1** – AUX 1
- **AUX2** – AUX 2
- **AV** – AV input
- **NAVI** – Navigation unit
- **TEL** – BT telephone
- **BT Audio** – Bluetooth audio player
- **EXT1** – External unit 1
- **EXT2** – External unit 2
- **M-CD** – Multi-CD player
- **XM** – XM tuner
- **SIRIUS** – SIRIUS tuner
- **OFF** – Turn the unit off
- **ESC** – Close source select menu

■ When the source icon is not displayed, you can display it by touching the screen.

■ To return to the playback display, touch **ESC**.

● When using the buttons, press SOURCE to select a source.

Press **SOURCE** repeatedly to switch between the following sources:
XM (XM tuner)—**SIRIUS** (SIRIUS tuner)—**TUNER** (tuner)—**TV** (television)—**AV** (AV)—**DVD-V** (built-in DVD player)—**M-CD** (multi-CD player)—**iPod** (iPod)—**EXT1** (external unit 1)—**EXT2** (external unit 2)—**AUX1** (AUX 1)—**AUX2** (AUX 2)—**NAVI** (navigation unit)—**TEL** (bluetooth telephone)—**BT Audio** (bluetooth audio player)

Notes

- In the following cases, the sound source will not change:
  - — When there is no unit corresponding to the selected source connected to this unit.
  - — When there is no disc in the unit.
  - — When there is no magazine in the multi-CD player.
  - — When the AUX (auxiliary input) is set to off.
  - — When the AV (AV input) is not set to **VIDEO**.
- External unit refers to a Pioneer product (such as one available in the future) that, although incompatible as a source, enables control of basic functions by this unit. Two external units can be controlled by this unit. When two external units are connected, the allocation of them to external unit 1 or external unit 2 is automatically set by this unit.

- When this unit's blue/white lead is connected to the vehicle's auto-antenna relay control terminal, the vehicle's antenna extends when this unit's source is turned on. To retract the antenna, turn the source off. ■

Loading/Ejecting discs

CAUTION

Keep hands and fingers clear of the unit when opening, closing, or adjusting the LCD panel. Be especially cautious of children's hands and fingers.

Loading a disc

Up to six discs can be stored into this unit. Each disc is stored in each disc holder allowing you to specify a holder for loading a disc.

1 Press OPEN on the unit to display loading/ejecting menu.

The LCD panel opens halfway, and the loading/ejecting menu is displayed on the screen.

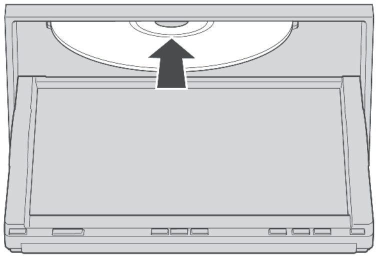
  - If the disc in the holder has already been played, the disc type is displayed on the holder icon (e.g. CD, DVD etc.).
  - **NO DISC** is displayed for an empty holder.

2 Touch LOAD next to the holder you want to insert a disc in.

The selected holder flashes. When **READY** is displayed, this unit becomes on standby to load a disc into the holder.

■ If the holder has already loaded a disc, you need to eject the disc first.

3 Insert a disc into the disc loading slot.



The disc is loaded into the selected holder. Repeat these steps until you have done loading discs into this unit.

■ To cancel loading the disc into the selected holder, touch **CANCEL**.

4 To replace the LCD panel to the original position, press OPEN on the unit.

■ When the automatic playback function is on, this unit will cancel the DVD menu and automatically start playback from the first chapter of the first title.

Notes

- The DVD player plays one, standard 12-cm disc at a time. Playing back an 8-cm disc is not possible with this unit. Playable disc and adapter are listed in the table below.

12-cm disc	8-cm disc	8-cm disc adapter
√	—	—

- Do not insert anything other than a disc into the disc loading slot.

- If you cannot insert a disc completely or if after you insert a disc the disc does not play, check that the label side of the disc is up. Press **OPEN** and touch ≜ to eject the disc, and check the disc for damage before inserting it again.

- If bookmark function is on, DVD playback resumes from the selected point.

- This unit does not automatically change discs even if it reaches to the end of the currently playing disc. To change discs, press ▲ or ▼ button (DISC) on the remote control.

Ejecting a disc

You can specify a holder that you eject a disc from.

1 Press OPEN on the unit to display loading/ejecting menu.

The LCD panel opens halfway, and the loading/ejecting menu is displayed on the screen.

- If the disc in the holder has already been played, the disc type is displayed on the holder icon (e.g. CD, DVD etc.).
- **NO DISC** is displayed for an empty holder.

2 Touch ⏏ next to the holder you want to eject the disc from.

The disc is ejected.

▪ You can eject all loaded discs at once. To do this, touch **ALL⏏**.

To cancel the all ejecting, touch **CANCEL**.

3 To replace the LCD panel to the original position, press OPEN on the unit. ▣

Adjusting the flap angle

You can adjust the flap angle as needed.

Important

When adjusting the flap angle, be sure to follow the procedures explained below. Forcibly adjusting the flap angle by hand may damage it.

1 Press and hold OPEN button on the unit to display the flap angle adjust menu.

2 Touch + or - to adjust the flap angle.

Each time you touch +, the flap comes out toward you. Touching - moves the flap the other way around.

- You can select from five positions for the flap angle.
- The adjusted flap angle will be memorized. The next time you eject or load discs, the flap returns to the position where you set the angle. ▣

Adjusting the volume

● **Use VOLUME to adjust the sound level.**

Press **VOLUME** to increase or decrease the source volume. ▣

Turning the unit off

● **When using the touch panel keys, touch the source icon and then touch OFF.**

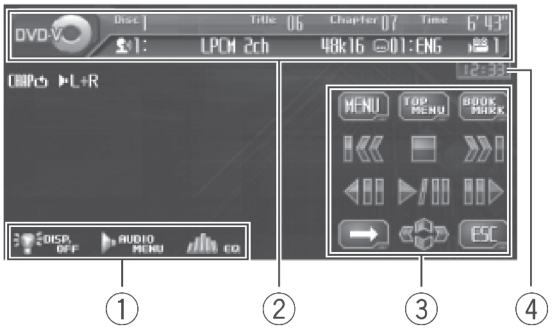
▪ When the source icon is not displayed, you can display it by touching the screen.

▪ When using the buttons, press **SOURCE** and hold until the unit turns off.

▪ To completely turn the display off, touch and hold **DISP. OFF**.

Touch panel key basic operation

Activating the touch panel keys



① **Common touch panel keys**
For details, refer to *Using the common touch panel keys* on this page.

② **Information bar**

③ **Touch panel keys**
Touch to do various operations.

④ **Clock display**

1 Touch the screen to activate the touch panel keys corresponding to each source.

The touch panel keys appear on the display.

- To go to the next group of touch panel keys, touch →.

2 Touch ESC to hide the touch panel keys.

Note

If you do not use the touch panel keys within 30 seconds, they will be hidden automatically.

Using the common touch panel keys

EQ, **AUDIO MENU** and **DISP. OFF** keys are commonly displayed in the source menu.

EQ key

Touch **EQ** to display the equalizer curve setting menu. Adjust the equalizer curve and make the best sound characteristic for the sound type.

AUDIO MENU key

Touch **AUDIO MENU** to display the menu for various settings.

DISP. OFF key

Touch and hold **DISP. OFF** to turn the display off. Touch the screen to turn the display on.

Using DISP. OFF to retract the vehicle's antenna

At the standard setting, the vehicle's auto antenna is automatically retracted when you select the source **OFF**. However, when a navigation unit or AVG-VDP1 is connected to this unit, your vehicle's antenna may be kept up-position even if the source **OFF** is selected. In that case, use **DISP. OFF** key and have the antenna retracted manually.

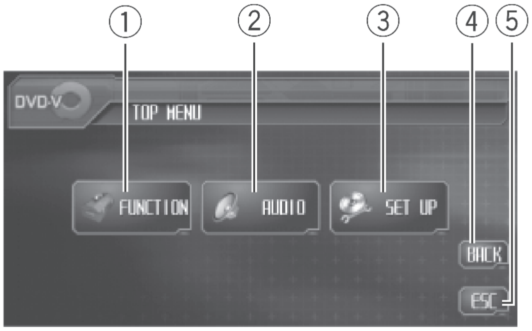
- Only when a Pioneer navigation unit or AVG-VDP1 is connected to this unit, you can operate this function.

● Touch the source OFF, and then, touch and hold DISP. OFF.

The display is turned off and your vehicle's antenna is retracted.

- When a Pioneer navigation unit (or AVG-VDP1) and the multi-channel processor (e.g. DEQ-P8000) are connected to this unit, the antenna should be retracted at the time when the source **OFF** is selected.
- While the antenna is retracted, a guidance voice/beep from the navigation unit is not properly mixed with the audio sound outputted from this unit.

Operating the menu



① **FUNCTION key**
Touch to select functions for each source.

② **AUDIO key**
Touch to select various sound quality controls.

③ **SETUP key**
Touch to select various setup functions.

④ **BACK key**
Touch to return to the previous display.

⑤ **ESC key**
Touch to cancel the control mode of functions.

1 Touch AUDIO MENU to display MENU.
MENU appears on the display.

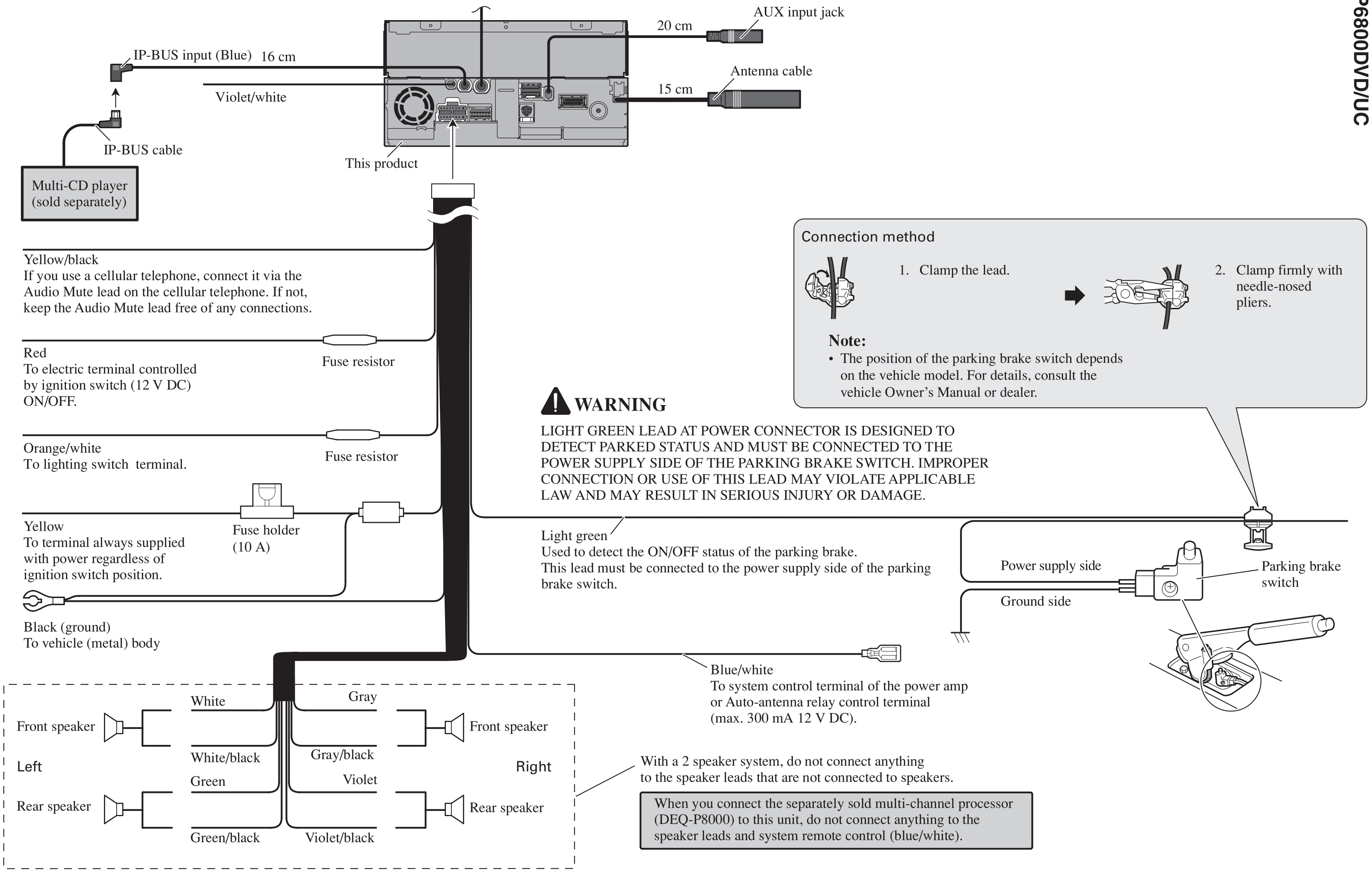
2 Touch the desired key to display the function names you want to operate.
- To go to the next group of function names, touch **NEXT**.
- To return to the previous group of function names, touch **PREV**.

3 Touch ESC to return to the display of each source.

Note

If you do not operate the function within about 30 seconds, the display is automatically returned to the playback display.

Connecting the power cord


IP-BUS input (Blue) 16 cm
Violet/white
IP-BUS cable
Multi-CD player (sold separately)
This product
20 cm
AUX input jack
15 cm
Antenna cable
Fuse resistor
Fuse resistor
Fuse holder (10 A)
Power supply side
Ground side
Parking brake switch
White
White/black
Green
Green/black
Gray
Gray/black
Violet
Violet/black
Front speaker
Left
Rear speaker
Front speaker
Right
Rear speaker

Yellow/black
If you use a cellular telephone, connect it via the Audio Mute lead on the cellular telephone. If not, keep the Audio Mute lead free of any connections.

Red
To electric terminal controlled by ignition switch (12 V DC) ON/OFF.

Orange/white
To lighting switch terminal.

Yellow
To terminal always supplied with power regardless of ignition switch position.

Black (ground)
To vehicle (metal) body

Connection method

1. Clamp the lead.
2. Clamp firmly with needle-nosed pliers.

Note:
- The position of the parking brake switch depends on the vehicle model. For details, consult the vehicle Owner's Manual or dealer.

⚠ WARNING

LIGHT GREEN LEAD AT POWER CONNECTOR IS DESIGNED TO DETECT PARKED STATUS AND MUST BE CONNECTED TO THE POWER SUPPLY SIDE OF THE PARKING BRAKE SWITCH. IMPROPER CONNECTION OR USE OF THIS LEAD MAY VIOLATE APPLICABLE LAW AND MAY RESULT IN SERIOUS INJURY OR DAMAGE.

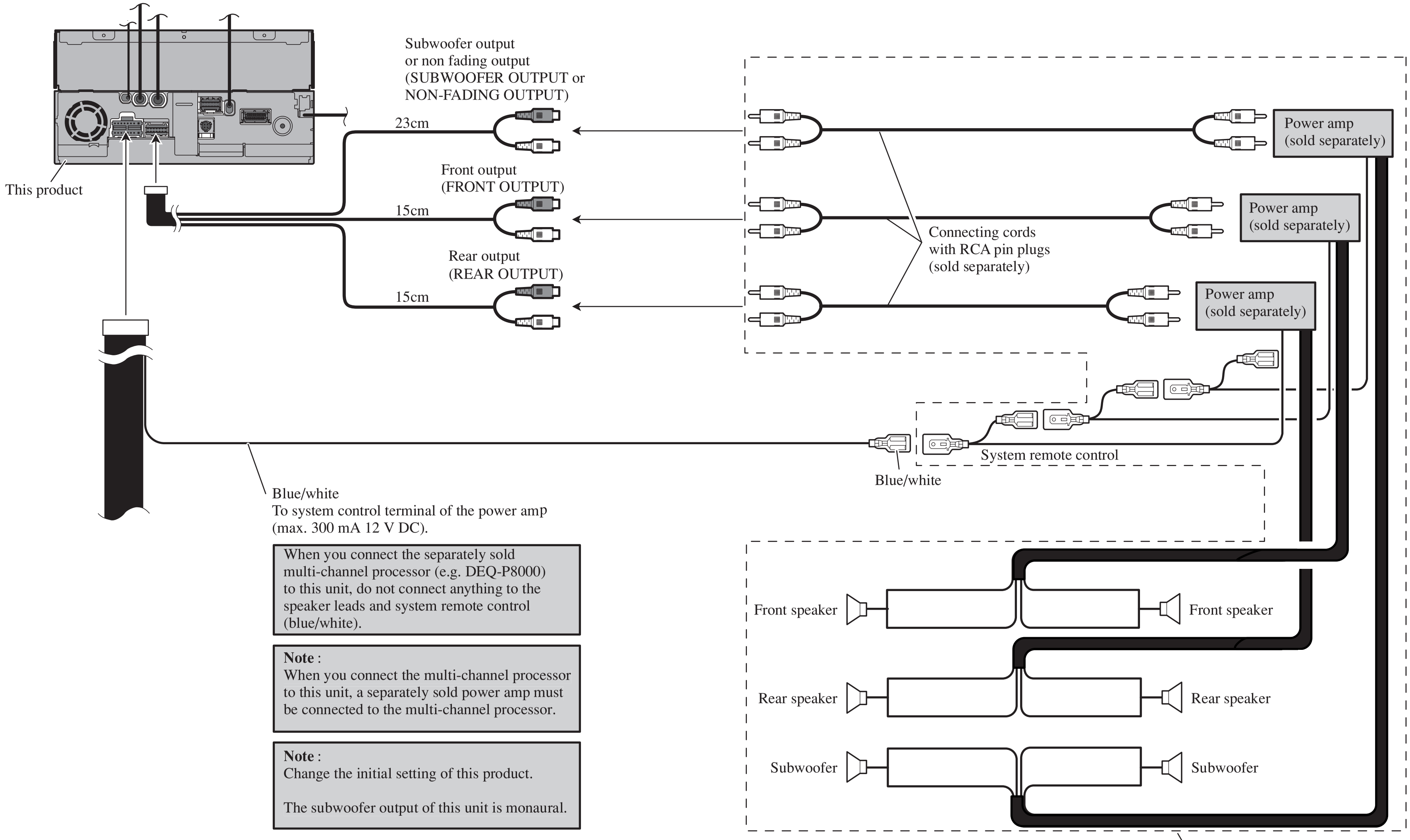
Light green
Used to detect the ON/OFF status of the parking brake.
This lead must be connected to the power supply side of the parking brake switch.

Blue/white
To system control terminal of the power amp or Auto-antenna relay control terminal
(max. 300 mA 12 V DC).

With a 2 speaker system, do not connect anything to the speaker leads that are not connected to speakers.

When you connect the separately sold multi-channel processor (DEQ-P8000) to this unit, do not connect anything to the speaker leads and system remote control (blue/white).

When connecting to separately sold power amp


This product
Subwoofer output
or non fading output
(SUBWOOFER OUTPUT or
NON-FADING OUTPUT)
23cm
Front output
(FRONT OUTPUT)
15cm
Rear output
(REAR OUTPUT)
15cm
Connecting cords
with RCA pin plugs
(sold separately)
Power amp
(sold separately)
Power amp
(sold separately)
Power amp
(sold separately)
System remote control
Blue/white
Blue/white
To system control terminal of the power amp
(max. 300 mA 12 V DC).
Front speaker
Front speaker
Rear speaker
Rear speaker
Subwoofer
Subwoofer

When you connect the separately sold multi-channel processor (e.g. DEQ-P8000) to this unit, do not connect anything to the speaker leads and system remote control (blue/white).

Note :
When you connect the multi-channel processor to this unit, a separately sold power amp must be connected to the multi-channel processor.

Note :
Change the initial setting of this product.

The subwoofer output of this unit is monaural.

Perform these connections when using the optional amplifier.

When connecting with a rear view camera

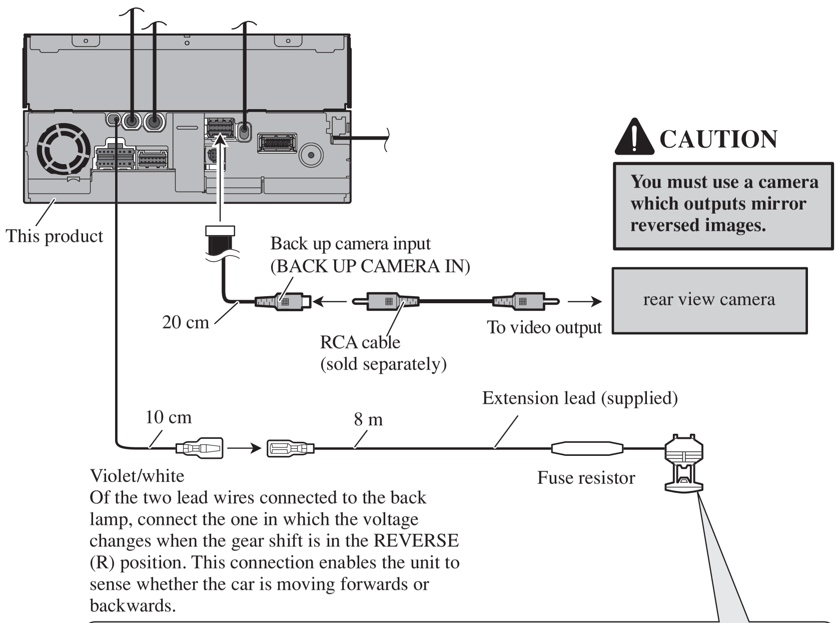
When using this product with a rear view camera, automatic switching to video from a rear view camera when the gear shift is moved to **REVERSE (R)** position is possible.

WARNING

USE INPUT ONLY FOR REVERSE OR MIRROR IMAGE REAR VIEW CAMERA. OTHER USE MAY RESULT IN INJURY OR DAMAGE.

⚠ CAUTION

- The screen image may appear reversed.
- The rear view camera function is to use this product as an aid to keep an eye on trailers, or backing into a tight parking spot. Do not use this function for entertainment purposes.
- The object in rear view may appear closer or more distant than in reality.

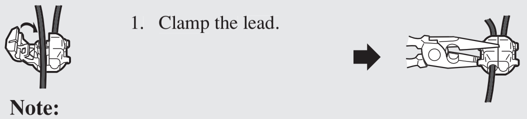

This product
Back up camera input
(BACK UP CAMERA IN)
20 cm
RCA cable
(sold separately)
To video output
rear view camera
Extension lead (supplied)
10 cm
8 m
Fuse resistor

⚠ CAUTION

You must use a camera which outputs mirror reversed images.

Violet/white
Of the two lead wires connected to the back lamp, connect the one in which the voltage changes when the gear shift is in the REVERSE (R) position. This connection enables the unit to sense whether the car is moving forwards or backwards.

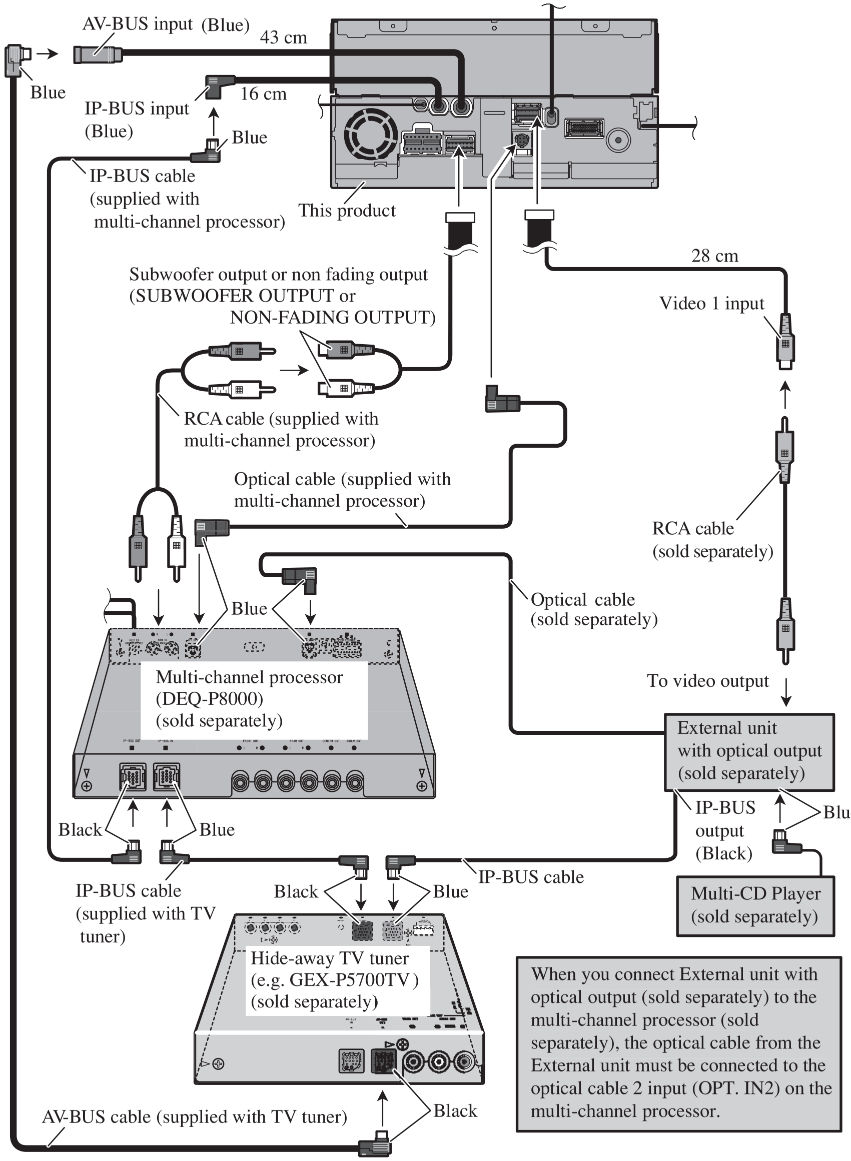
Connection method



1. Clamp the lead.
2. Clamp firmly with needle-nosed pliers.

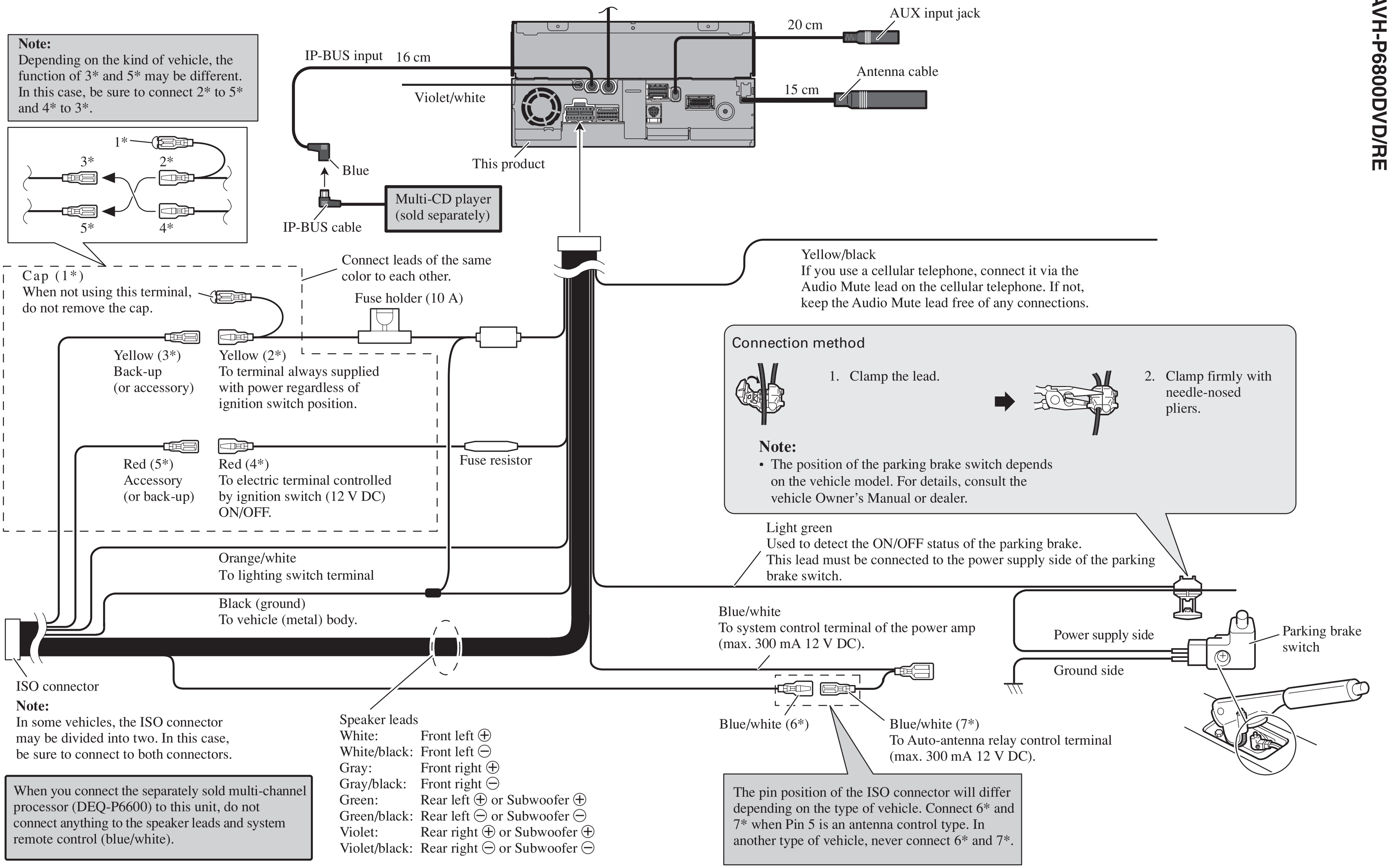
Note:
- It is necessary to set **B.CAMERA** to **ON** in **SETUP** when connecting the rear view camera.

When connecting with a multi-channel processor


AV-BUS input (Blue)
43 cm
Blue
IP-BUS input
(Blue)
16 cm
Blue
IP-BUS cable
(supplied with
multi-channel processor)
This product
28 cm
Video 1 input
Subwoofer output or non fading output
(SUBWOOFER OUTPUT or
NON-FADING OUTPUT)
RCA cable (supplied with
multi-channel processor)
Optical cable (supplied with
multi-channel processor)
RCA cable
(sold separately)
Optical cable
(sold separately)
Blue
Multi-channel processor
(DEQ-P8000)
(sold separately)
To video output
External unit
with optical output
(sold separately)
IP-BUS
output
(Black)
Blue
Black
Blue
IP-BUS cable
(supplied with TV
tuner)
Black
Blue
IP-BUS cable
Multi-CD Player
(sold separately)
Hide-away TV tuner
(e.g. GEX-P5700TV)
(sold separately)
AV-BUS cable (supplied with TV tuner)
Black

When you connect External unit with optical output (sold separately) to the multi-channel processor (sold separately), the optical cable from the External unit must be connected to the optical cable 2 input (OPT. IN2) on the multi-channel processor.

Connecting the power cord


AUX input jack
20 cm
Antenna cable
15 cm
IP-BUS input
16 cm
Violet/white
This product
Blue
IP-BUS cable
Multi-CD player (sold separately)
1*
2*
3*
4*
5*
Fuse holder (10 A)
Fuse resistor
ISO connector
Power supply side
Ground side
Parking brake switch
Blue/white (6*)

Note:
Depending on the kind of vehicle, the function of 3* and 5* may be different. In this case, be sure to connect 2* to 5* and 4* to 3*.

Cap (1*)
When not using this terminal, do not remove the cap.

Connect leads of the same color to each other.

Yellow (3*)
Back-up
(or accessory)

Yellow (2*)
To terminal always supplied with power regardless of ignition switch position.

Red (5*)
Accessory
(or back-up)

Red (4*)
To electric terminal controlled by ignition switch (12 V DC) ON/OFF.

Orange/white
To lighting switch terminal

Black (ground)
To vehicle (metal) body.

Yellow/black
If you use a cellular telephone, connect it via the Audio Mute lead on the cellular telephone. If not, keep the Audio Mute lead free of any connections.

Connection method

1. Clamp the lead.
2. Clamp firmly with needle-nosed pliers.

Note:
- The position of the parking brake switch depends on the vehicle model. For details, consult the vehicle Owner’s Manual or dealer.

Light green
Used to detect the ON/OFF status of the parking brake.
This lead must be connected to the power supply side of the parking brake switch.

Blue/white
To system control terminal of the power amp (max. 300 mA 12 V DC).

Blue/white (7*)
To Auto-antenna relay control terminal (max. 300 mA 12 V DC).

ISO connector

Note:
In some vehicles, the ISO connector may be divided into two. In this case, be sure to connect to both connectors.

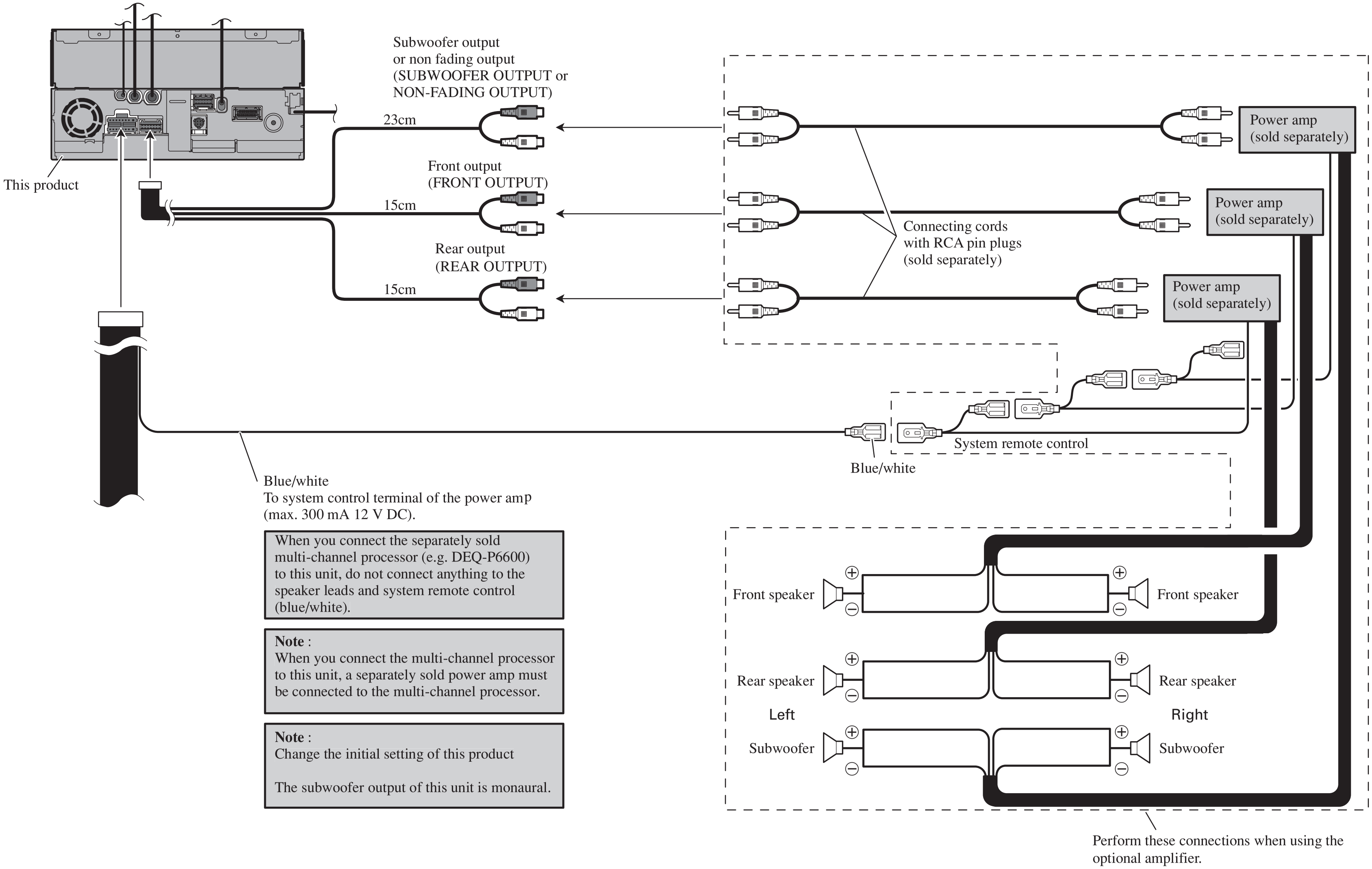
Speaker leads

White:	Front left ⊕
White/black:	Front left ⊖
Gray:	Front right ⊕
Gray/black:	Front right ⊖
Green:	Rear left ⊕ or Subwoofer ⊕
Green/black:	Rear left ⊖ or Subwoofer ⊖
Violet:	Rear right ⊕ or Subwoofer ⊕
Violet/black:	Rear right ⊖ or Subwoofer ⊖

The pin position of the ISO connector will differ depending on the type of vehicle. Connect 6* and 7* when Pin 5 is an antenna control type. In another type of vehicle, never connect 6* and 7*.

When you connect the separately sold multi-channel processor (DEQ-P6600) to this unit, do not connect anything to the speaker leads and system remote control (blue/white).

When connecting to separately sold power amp


Subwoofer output
or non fading output
(SUBWOOFER OUTPUT or
NON-FADING OUTPUT)
23cm
Front output
(FRONT OUTPUT)
15cm
Rear output
(REAR OUTPUT)
15cm
This product
Power amp
(sold separately)
Power amp
(sold separately)
Power amp
(sold separately)
Connecting cords
with RCA pin plugs
(sold separately)
System remote control
Blue/white
Blue/white
To system control terminal of the power amp
(max. 300 mA 12 V DC).
Front speaker
Front speaker
Rear speaker
Rear speaker
Left
Right
Subwoofer
Subwoofer
Perform these connections when using the
optional amplifier.

When you connect the separately sold multi-channel processor (e.g. DEQ-P6600) to this unit, do not connect anything to the speaker leads and system remote control (blue/white).

Note :
When you connect the multi-channel processor to this unit, a separately sold power amp must be connected to the multi-channel processor.

Note :
Change the initial setting of this product

The subwoofer output of this unit is monaural.

When connecting with a rear view camera

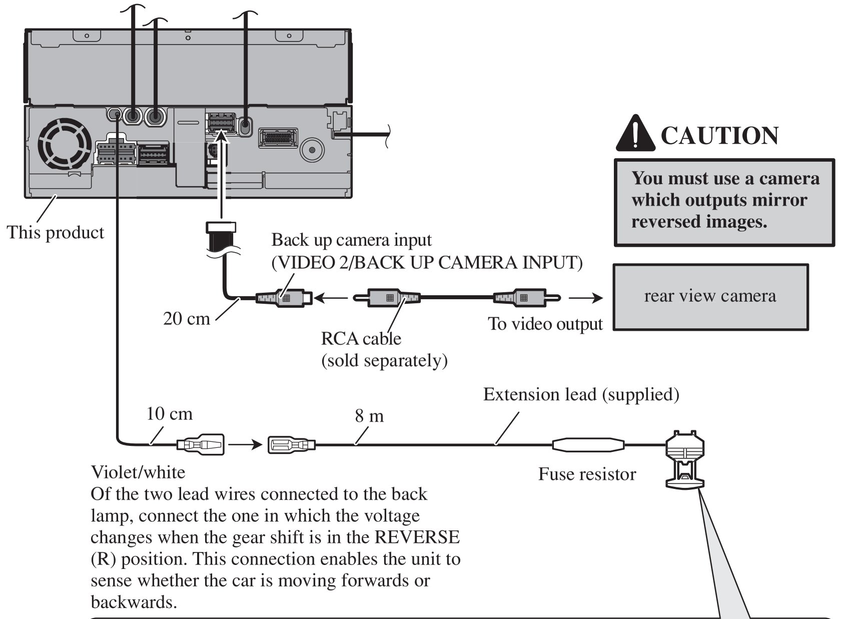
When using this product with a rear view camera, automatic switching to video from a rear view camera when the gear shift is moved to **REVERSE (R)** position is possible.

WARNING

USE INPUT ONLY FOR REVERSE OR MIRROR IMAGE REAR VIEW CAMERA. OTHER USE MAY RESULT IN INJURY OR DAMAGE.

⚠ CAUTION

- The screen image may appear reversed.
- The rear view camera function is to use this product as an aid to keep an eye on trailers, or backing into a tight parking spot. Do not use this function for entertainment purposes.
- The object in rear view may appear closer or more distant than in reality.


This product
Back up camera input
(VIDEO 2/BACK UP CAMERA INPUT)
20 cm
RCA cable
(sold separately)
To video output
rear view camera
10 cm
8 m
Extension lead (supplied)
Fuse resistor

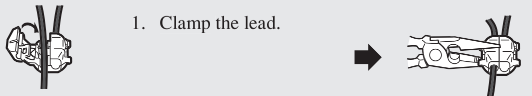
⚠ CAUTION

You must use a camera which outputs mirror reversed images.

Violet/white

Of the two lead wires connected to the back lamp, connect the one in which the voltage changes when the gear shift is in the REVERSE (R) position. This connection enables the unit to sense whether the car is moving forwards or backwards.

Connection method

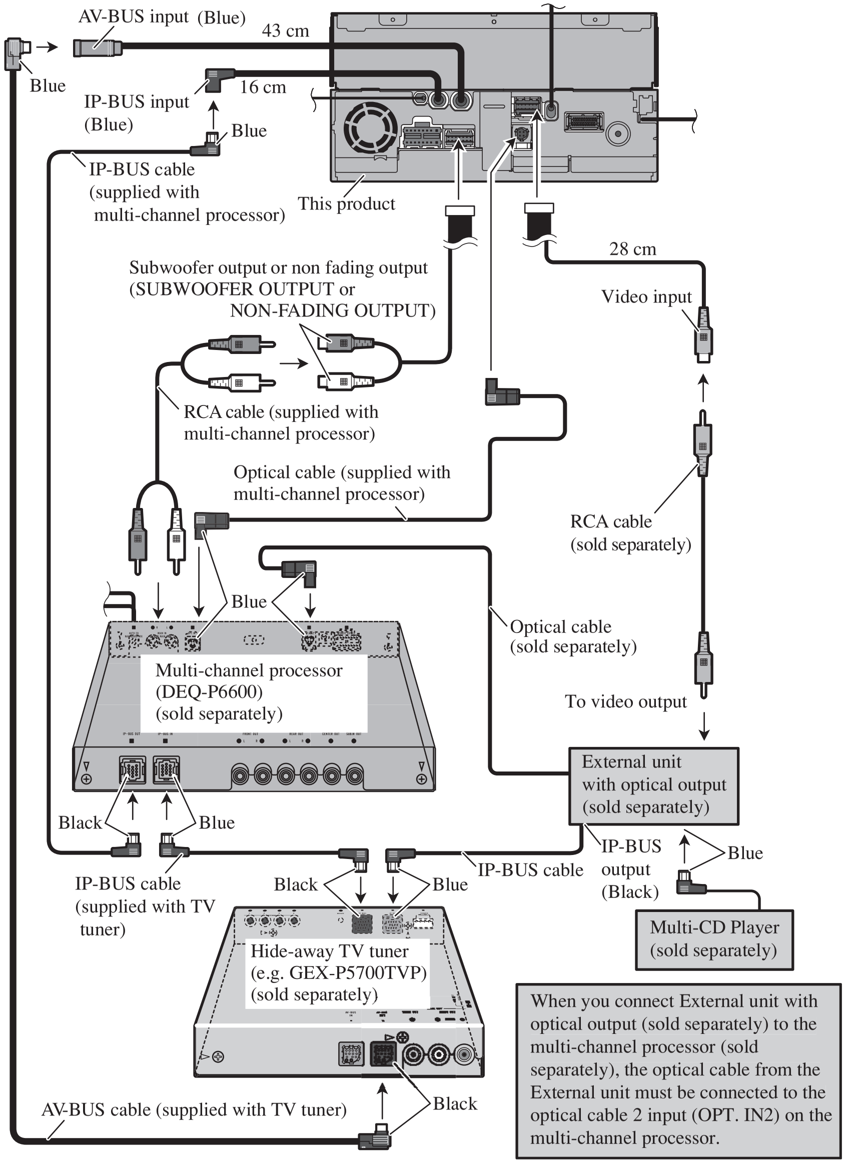


1. Clamp the lead.
2. Clamp firmly with needle-nosed pliers.

Note:

- It is necessary to set **AV INPUT2** to **B.CAMERA** in **SETUP** when connecting the rear view camera.

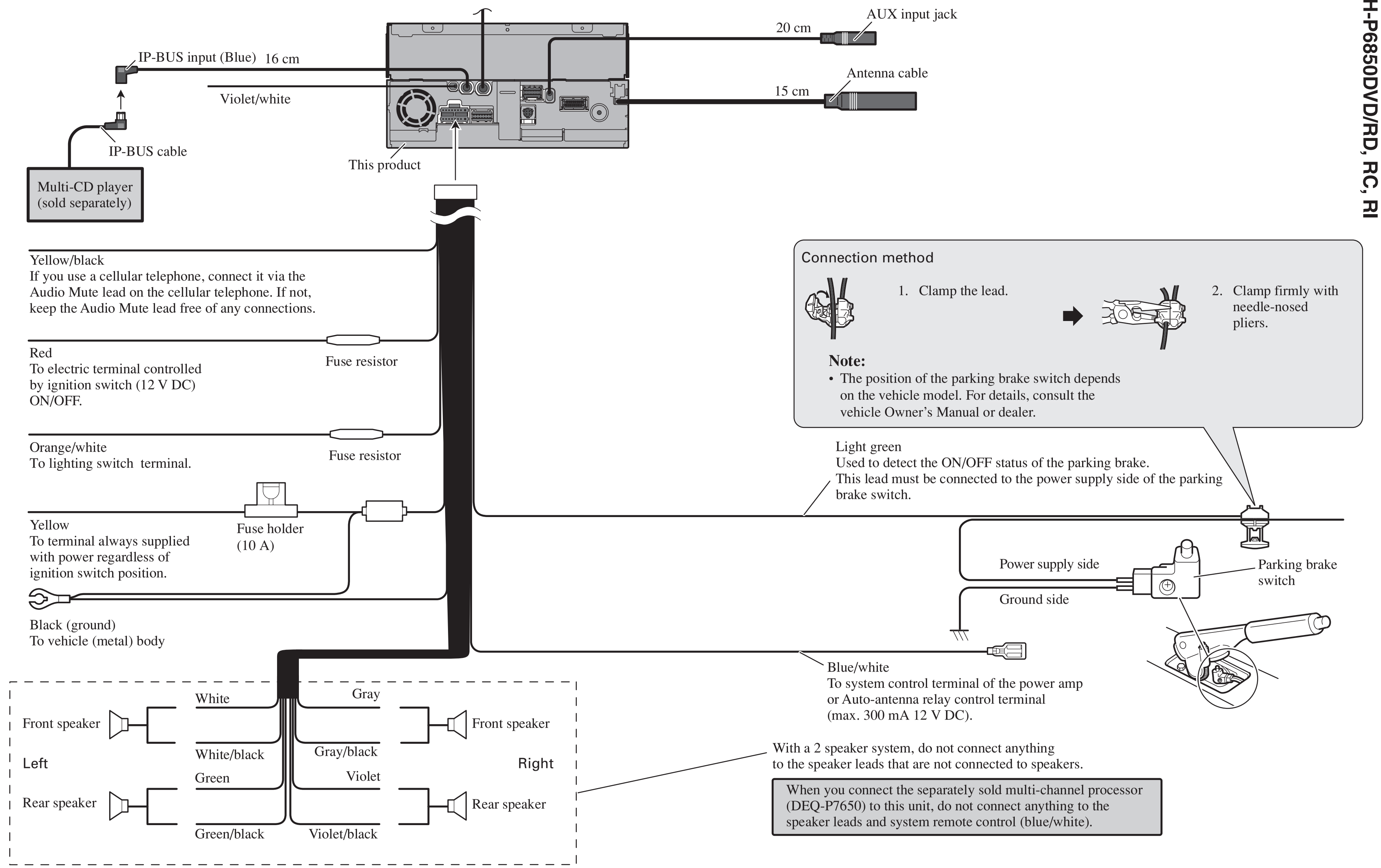
When connecting with a multi-channel processor


AV-BUS input (Blue)
43 cm
Blue
IP-BUS input
(Blue)
16 cm
Blue
IP-BUS cable
(supplied with
multi-channel processor)
This product
28 cm
Video input
Subwoofer output or non fading output
(SUBWOOFER OUTPUT or
NON-FADING OUTPUT)
RCA cable (supplied with
multi-channel processor)
Optical cable (supplied with
multi-channel processor)
RCA cable
(sold separately)
Blue
Optical cable
(sold separately)
Multi-channel processor
(DEQ-P6600)
(sold separately)
To video output
External unit
with optical output
(sold separately)
Black
Blue
IP-BUS
output
(Black)
Blue
IP-BUS cable
IP-BUS cable
(supplied with TV
tuner)
Black
Blue
Multi-CD Player
(sold separately)
Hide-away TV tuner
(e.g. GEX-P5700TVP)
(sold separately)
AV-BUS cable (supplied with TV tuner)
Black

When you connect External unit with optical output (sold separately) to the multi-channel processor (sold separately), the optical cable from the External unit must be connected to the optical cable 2 input (OPT. IN2) on the multi-channel processor.

AVH-P6850DVD/RD, RC, RI

Connecting the power cord



IP-BUS input (Blue) 16 cm
Violet/white
IP-BUS cable
Multi-CD player (sold separately)
This product
20 cm
AUX input jack
15 cm
Antenna cable
Fuse resistor
Fuse resistor
Fuse holder (10 A)
Power supply side
Ground side
Parking brake switch
White
White/black
Green
Green/black
Gray
Gray/black
Violet
Violet/black
Front speaker
Left
Rear speaker
Front speaker
Right
Rear speaker

Yellow/black
If you use a cellular telephone, connect it via the Audio Mute lead on the cellular telephone. If not, keep the Audio Mute lead free of any connections.

Red
To electric terminal controlled by ignition switch (12 V DC) ON/OFF.

Orange/white
To lighting switch terminal.

Yellow
To terminal always supplied with power regardless of ignition switch position.

Black (ground)
To vehicle (metal) body

Connection method

1. Clamp the lead.
2. Clamp firmly with needle-nosed pliers.

Note:
- The position of the parking brake switch depends on the vehicle model. For details, consult the vehicle Owner's Manual or dealer.

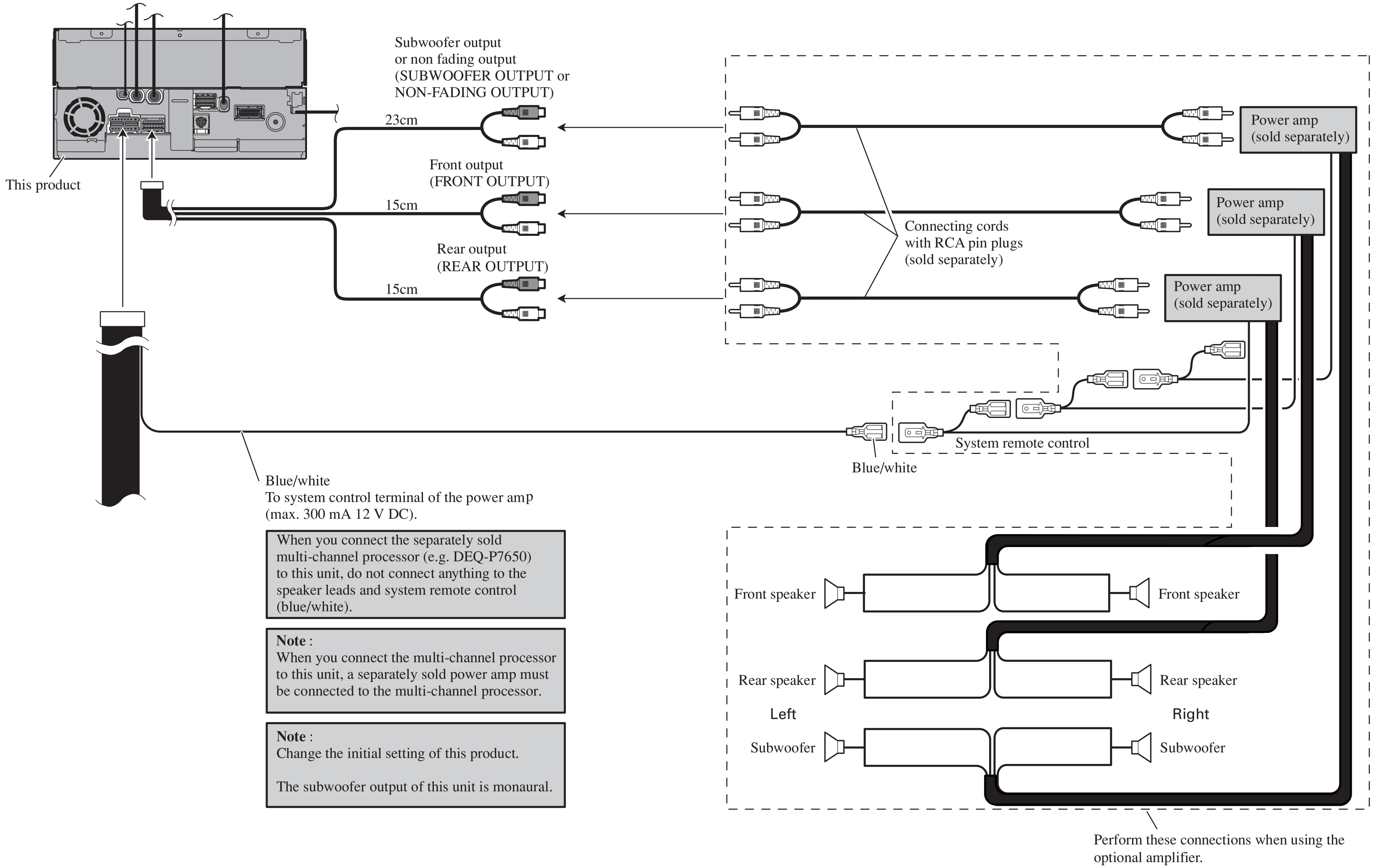
Light green
Used to detect the ON/OFF status of the parking brake.
This lead must be connected to the power supply side of the parking brake switch.

Blue/white
To system control terminal of the power amp or Auto-antenna relay control terminal
(max. 300 mA 12 V DC).

With a 2 speaker system, do not connect anything to the speaker leads that are not connected to speakers.

When you connect the separately sold multi-channel processor (DEQ-P7650) to this unit, do not connect anything to the speaker leads and system remote control (blue/white).

When connecting to separately sold power amp


Subwoofer output
or non fading output
(SUBWOOFER OUTPUT or
NON-FADING OUTPUT)
23cm
Front output
(FRONT OUTPUT)
15cm
Rear output
(REAR OUTPUT)
15cm
This product
Connecting cords
with RCA pin plugs
(sold separately)
Power amp
(sold separately)
Power amp
(sold separately)
Power amp
(sold separately)
System remote control
Blue/white
Blue/white
To system control terminal of the power amp
(max. 300 mA 12 V DC).
Front speaker
Front speaker
Rear speaker
Rear speaker
Left
Right
Subwoofer
Subwoofer
Perform these connections when using the
optional amplifier.

When you connect the separately sold multi-channel processor (e.g. DEQ-P7650) to this unit, do not connect anything to the speaker leads and system remote control (blue/white).

Note :
When you connect the multi-channel processor to this unit, a separately sold power amp must be connected to the multi-channel processor.

Note :
Change the initial setting of this product.

The subwoofer output of this unit is monaural.

When connecting with a rear view camera

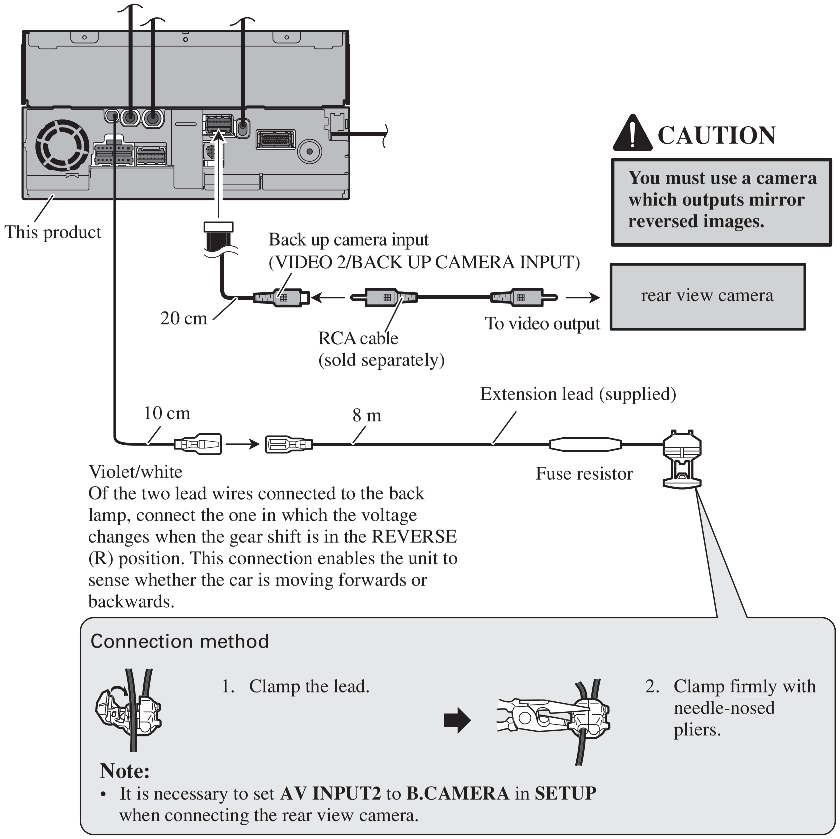
When using this product with a rear view camera, automatic switching to video from a rear view camera when the gear shift is moved to **REVERSE (R)** position is possible.

WARNING

USE INPUT ONLY FOR REVERSE OR MIRROR IMAGE REAR VIEW CAMERA. OTHER USE MAY RESULT IN INJURY OR DAMAGE.

⚠ CAUTION

- The screen image may appear reversed.
- The rear view camera function is to use this product as an aid to keep an eye on trailers, or backing into a tight parking spot. Do not use this function for entertainment purposes.
- The object in rear view may appear closer or more distant than in reality.


This product
Back up camera input
(VIDEO 2/BACK UP CAMERA INPUT)
20 cm
RCA cable
(sold separately)
To video output
rear view camera
10 cm
8 m
Extension lead (supplied)
Fuse resistor
Violet/white

⚠ CAUTION

You must use a camera which outputs mirror reversed images.

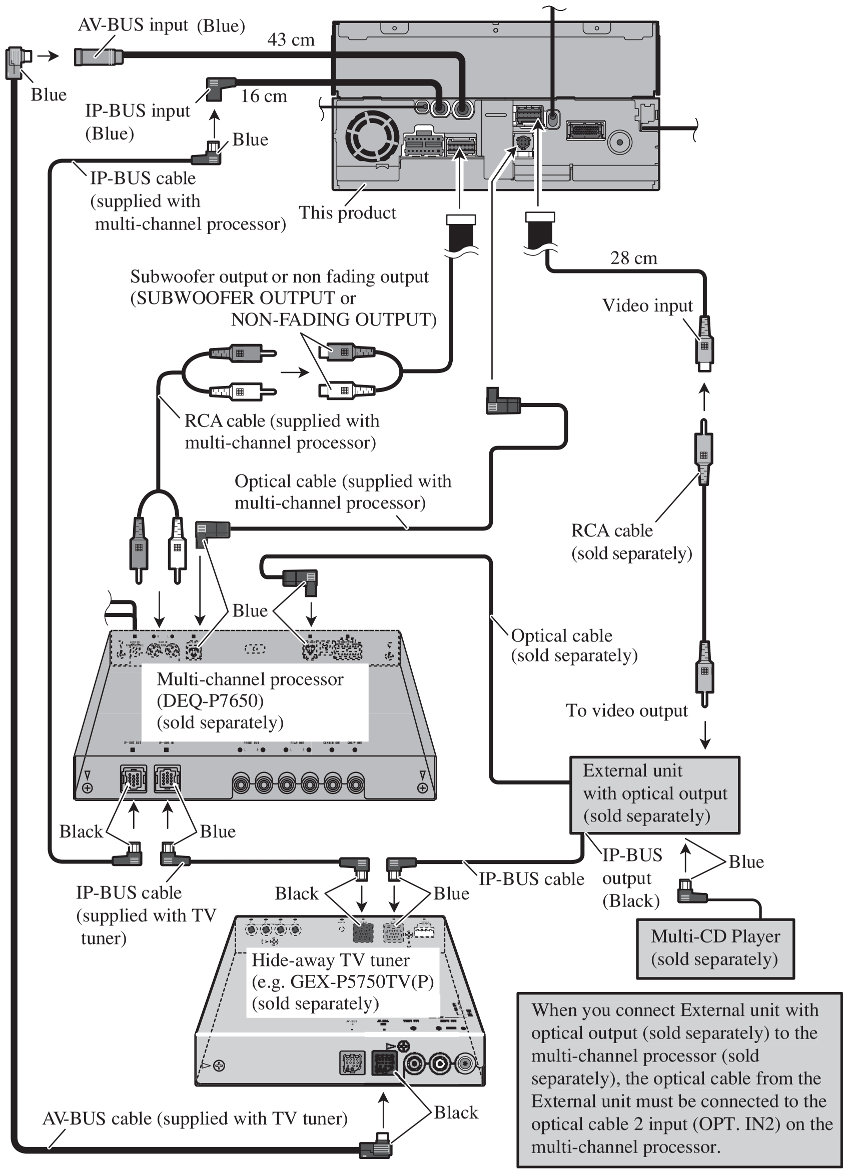
Of the two lead wires connected to the back lamp, connect the one in which the voltage changes when the gear shift is in the REVERSE (R) position. This connection enables the unit to sense whether the car is moving forwards or backwards.

Connection method

1. Clamp the lead.
2. Clamp firmly with needle-nosed pliers.

Note:
- It is necessary to set **AV INPUT2** to **B.CAMERA** in **SETUP** when connecting the rear view camera.

When connecting with a multi-channel processor


AV-BUS input (Blue)
43 cm
Blue
IP-BUS input
(Blue)
16 cm
Blue
IP-BUS cable
(supplied with
multi-channel processor)
This product
28 cm
Subwoofer output or non fading output
(SUBWOOFER OUTPUT or
NON-FADING OUTPUT)
Video input
RCA cable (supplied with
multi-channel processor)
Optical cable (supplied with
multi-channel processor)
RCA cable
(sold separately)
Blue
Optical cable
(sold separately)
Multi-channel processor
(DEQ-P7650)
(sold separately)
To video output
External unit
with optical output
(sold separately)
Black
Blue
IP-BUS cable
(supplied with TV
tuner)
Black
Blue
IP-BUS cable
IP-BUS
output
(Black)
Blue
Multi-CD Player
(sold separately)
Hide-away TV tuner
(e.g. GEX-P5750TV(P)
(sold separately)
AV-BUS cable (supplied with TV tuner)
Black

When you connect External unit with optical output (sold separately) to the multi-channel processor (sold separately), the optical cable from the External unit must be connected to the optical cable 2 input (OPT. IN2) on the multi-channel processor.

● Jigs List

Name	Jig No.	Remarks
Assembly jig	GGF1538	Assembly jig for MG4 (3pcs)
Flexible extension	GGD1170	40-Pin flexible extension

● Grease List

Name	Jig No.	Remarks
Grease(E Paste)	GEM1024	Mechanism Module Unit(SERVICE)

Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
DVD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

Portions to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

● Internal multi-DVD shipping position mode setting

Auto change to the SHIP MODE after ALL DISC EJECT.

NOTE :
Do not switch off ACC and +B at the same time immediately after ejecting DISC.
(Switch off +B at 5 seconds after the shutter door is closed.)

*PICK UP is made to be automatically shifted to SHIP MODE. However, the above action may discontinue operation, disabling a shift to SHIP MODE.

Pioneer sound.vision.soul

Service Manual

ORDER NO.
CRT3495

DVD MECHANISM MODULE(MG4)

CX-3150

● **This service manual describes the operation of the DVD mechanism module incorporated in models listed in the table below.**
● **When performing repairs use this manual together with the specific manual for model under repair.**

Model	Service Manual	DVD Mechanism Module
FX-MG9857DVZT/UC FX-MG9857DVZT-91/UC FX-MG9857DVZT/EW FX-MG9857DVZT-91/EW FX-MG9757DVZT/EW FX-MG9757DVZT-91/EW FX-MG9757DVZT/AU FX-MG9757DVZT-91/AU	CRT3494	CXK7402

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3. DISASSEMBLY 29
4. HOW TO ASSEMBLE 37

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
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PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
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K-ZZU. JULY 2005 Printed in Japan

1. CIRCUIT DESCRIPTIONS

1 Front End Part (MN35103UB, MN35104UB:IC1501)

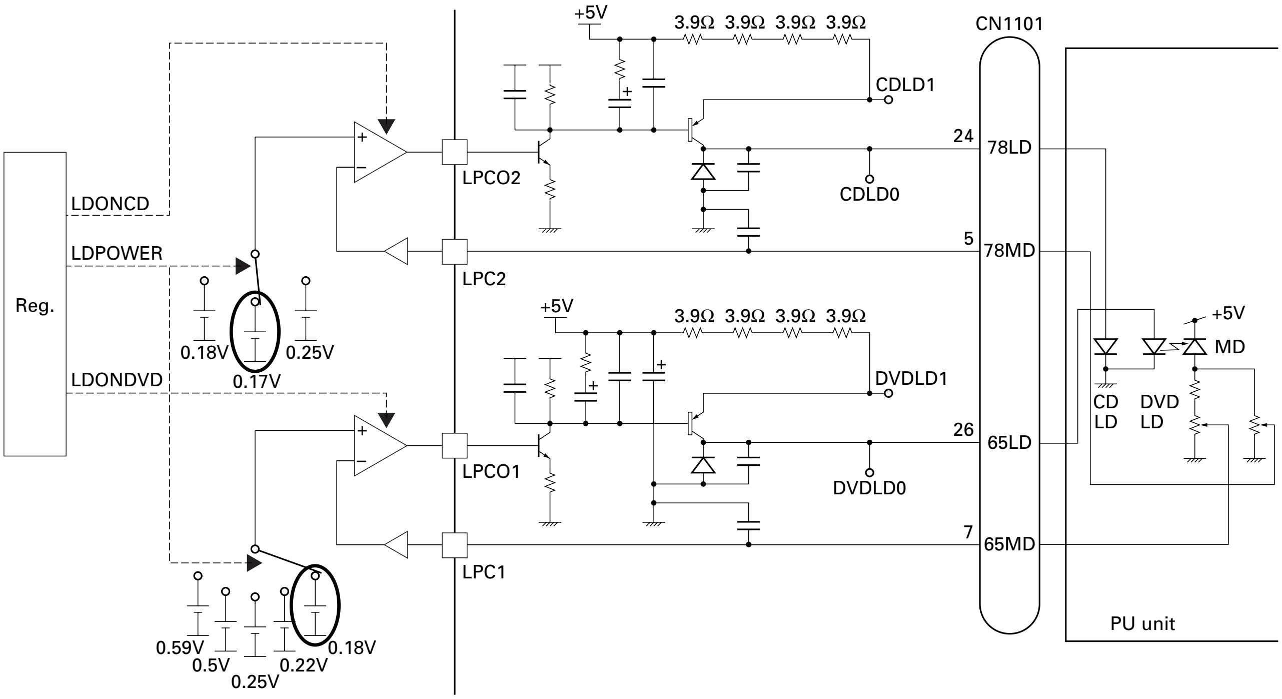
MN35103UB and MN35104UB are 1-chip LSI for DVD-Player. The connection of this LSI to the Driver IC, SDRAM, Flash-ROM, Audio-DAC, etc. can configure the DVD-Player System.
This LSI contains Front End (SODC/FE) that performs RF signal /Servo /Decode processings, Back End (AV decoder/BE) that performs the video decode processing such as MPEG1/MPEG2/JPEG and audio decode processing such as DVD-Audio/AC-3/DTS/MP3, and the system controller (Siscon) for controlling the system.
Front End part realizes the arithmetic processing of optical head signal and RF signal processing, the digital signal processing for DVD-ROM reproduction that conforms to DVD standards (16-8 Demodulation, Error correction), the digital signal processing for CD-DA/CD-ROM (Error correction), AV decoder transmission, servo control, spindle motor control and seek control.
Please take note that, since (FEP) and (SODC) with DVD mecha-module (MS3) of CX-3016 are integrated into one chip at MN35103UB and MN35104UB, the waveforms of servo system on the front end which had previously appeared at MS3, i.e., the waveforms of FE, TE and AS, cannot be seen anymore.

1.1 Analog Block (MN35103UB, MN35104UB:IC1501)

The analog block for IC1501 generates the servo signals including focus and tracking, processes addition of RF signals, and controls the laser power of pickup.
The servo system contains focus operation amp, focus offset adjustment circuit, 3-beam tracking operation amp, phase difference tracking detection circuit, tracking offset adjustment circuit, TE2 value-making circuit.
Also, RF signal processing system contains the functions of AGC and equalizer.

1.1.1 APC Circuit

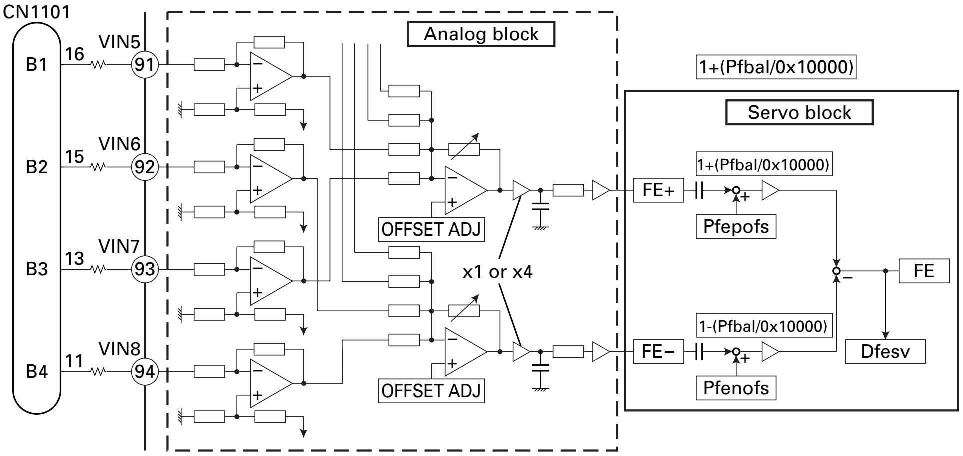
The optical output for the laser diode (LD) has large minus temperature characteristics. Therefore, the constant optical output cannot be obtained when LD is driven by the constant current. APC circuit controls the electric current so as to provide constant output at the monitor diode (MD). MN35103UB and MN35104UB contain two types of APC circuits, one for DVD and another for CD. The LD electric current for DVD (CD) can be obtained by dividing the voltage measurements between DVDLD1 (CDLD1) and 5V by 15.6Ω (3.9Ω×4=15.6Ω). For DVD (CD), the results are approx. 26mA (44mA).



1.1.2 FE Generation Circuit

Focus Error (FE) Generation Circuit

Each of input signals from B1 to B4 which had been quartered by PU within the analog block is input to IC 1501 passing through the resistance and becomes a signal of FE+=−(B1+B3) and FE−=−(B2+B4) after adding a focus offset adjustment value. Then, the signal is AD-converted within the servo block and adds an offset cancel value to become FE, generating a signal of FE=(FE+)−(FE−).

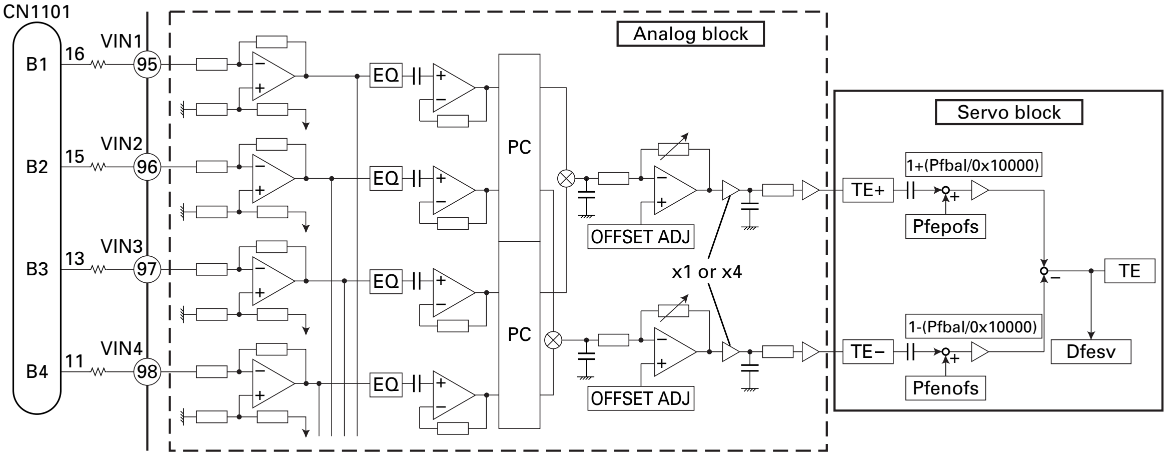

CN1101
B1
B2
B3
B4
16
15
13
11
VIN5
VIN6
VIN7
VIN8
91
92
93
94
Analog block
OFFSET ADJ
OFFSET ADJ
x1 or x4
1+(Pfbal/0x10000)
Servo block
1+(Pfbal/0x10000)
FE+
Pfepofs
FE
1-(Pfbal/0x10000)
FE−
Dfesv
Pfenofs

1.1.3 TE Generation Circuit

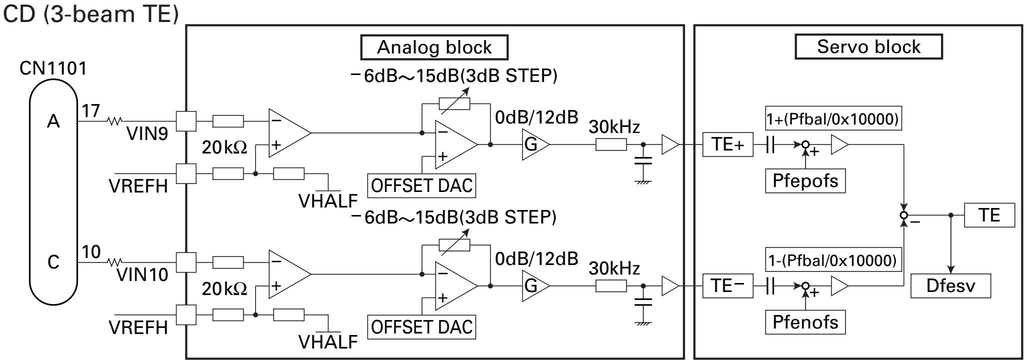
Trackings Error (TE) Generation Circuit

For DVD, TE is generated, with the application of a phase contrast method, from the phase difference of (B2+B4) and (B1+B3). For CD, TE is generated, with the application of a 3-beam method, by sending the signal to the variable amp set for the tracking offset adjustment via outer-attached resistance and then by AD-converting it to make the formula of TE=A−C.

· DVD (TE from phase difference)


CN1101
B1
B2
B3
B4
16
15
13
11
VIN1
VIN2
VIN3
VIN4
95
96
97
98
Analog block
EQ
EQ
EQ
EQ
PC
PC
OFFSET ADJ
OFFSET ADJ
x1 or x4
Servo block
1+(Pfbal/0x10000)
TE+
Pfepofs
TE
1-(Pfbal/0x10000)
TE−
Dfesv
Pfenofs

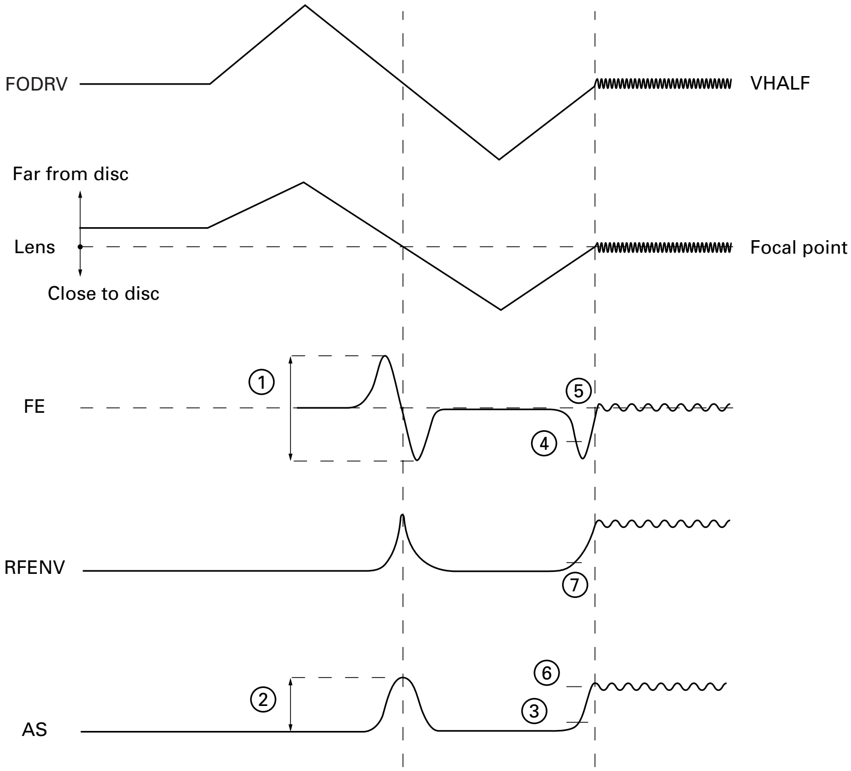
· CD (3-beam TE)


CN1101
A
C
17
10
VIN9
VIN10
VREFH
VREFH
20kΩ
20kΩ
VHALF
VHALF
Analog block
−6dB∼15dB(3dB STEP)
−6dB∼15dB(3dB STEP)
OFFSET DAC
OFFSET DAC
0dB/12dB
0dB/12dB
G
G
30kHz
30kHz
Servo block
1+(Pfbal/0x10000)
TE+
Pfepofs
TE
1-(Pfbal/0x10000)
TE−
Dfesv
Pfenofs

1.2 Servo Block (MN35103UB, MN35104UB:IC1501)

Servo block performs focus, tracking, servo control for traverse, spindle motor control and seek control.

1.2.1 Focus Close



After issuing the focus close command, the following processes are taken for both DVD and CD.

1. Measure and optimize signal levels
   First drive PU lens far from the disc and then drive closer to the disc. At the focal point met in the process of this move, measure signal levels of FE, AS and RFENV respectively, and optimize their levels for FE and AS (1 & 2 in the above figure).
2. Focus closing
   Next, drive the lens far from the disc again to detect the closing levels of FE and AS.
   Then activate focus loop filter for closing focus (3～6).
3. Check closing
   Check the closing with signal levels of AS and RFENV (6 & 7).

Focus search in test mode can check the signal levels and focus drive voltages for FE, AS and RFEV.

1.2.2 Tracking Close

After issuing the tracking close command, the following processes are taken for both DVD and CD.

1. Tracking brake
   Measure one half cycle of the tracking cross and if the cycle is within the range of designation, output the brake pals.
   Output direction of brake pals is determined by the phase relations of OFTR and TKC (TE's binarization) signals.
   After confirming that the swing of lens against disc is controlled, the brake stops and the closing begins. If the closing condition is not met within 10msec. after outputting brake, the brake stops and the closing begins.
2. Tracking closing
   Process the tracking drive hold with OFTR signal.
3. Check closing
   Check whether or not the track jump does not exceed the designated number within the designated term.
   Closing check will be time-out at 20msec. Retry using a command from the microcomputer.

1.2.3 Track Jump

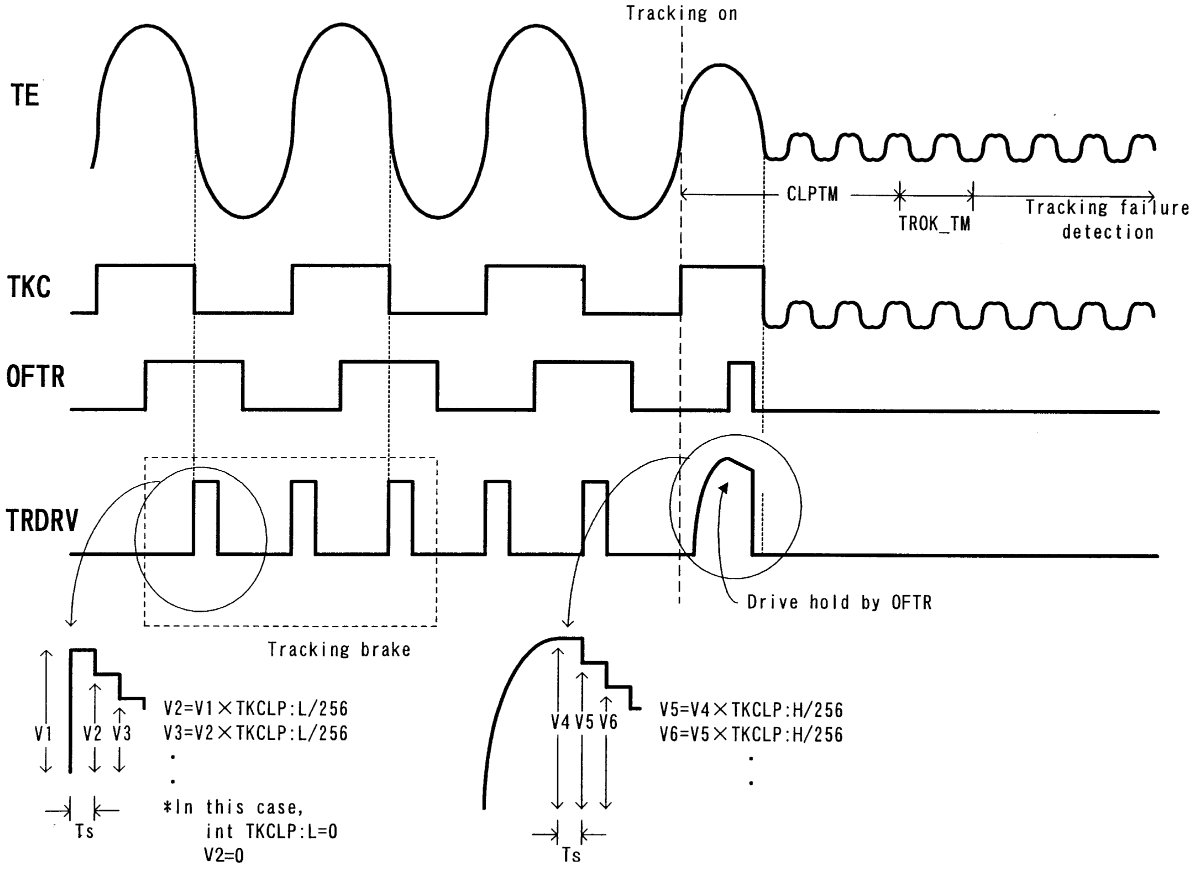
The system selects from three types of methods; i.e. interval jump, multi jump and traverse seek, according to the target number of moving tracks.

1. Interval Jump
   The detailed seek is capable due to the execution of repetitive one-track jumps.
   It is used when approaching to the target track or seek-operating to an adjacent track.
2. Multi Jump
   It counts both edges of the track cross signal TKC and moves for designated number of track counts.
3. Traverse Seek
   It controls the movement speed by measuring the time of the track cross signal TKC and manages the vibration of pickup generated upon movement to the minimum.

Types of target number of moving jumps illustrating the jump switch setting for both DVD and CD.

DVD	CD
1-10 Interval Jump	1-10 Interval Jump
11-100 Multi Jump	11-32 Multi Jump
101-500 Combination of Multi Jump and Interval Jump	33-500 Combination of Multi Jump and Interval Jump
Over 501 Traverse Seek	Over 501 Traverse Seek

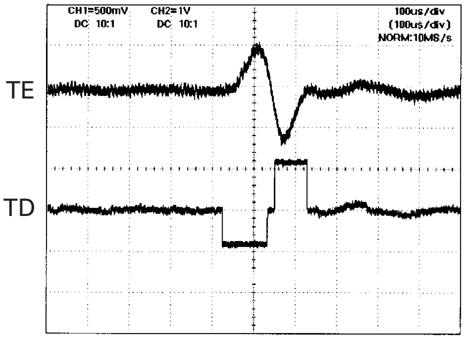
The waveforms of track jumps are shown in the next page.



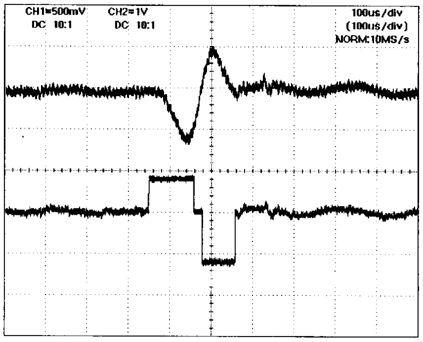
Tracking on
TE
CLPTM
TROK_TM
Tracking failure detection
TKC
OFTR
TRDRV
Drive hold by OFTR
Tracking brake
V1
V2
V3
V2=V1×TKCLP:L/256
V3=V2×TKCLP:L/256
·
·
Ts
*In this case,
int TKCLP:L=0
V2=0
V4
V5
V6
V5=V4×TKCLP:H/256
V6=V5×TKCLP:H/256
·
·
Ts

Interval Jump (1 Track)

Outer Jump

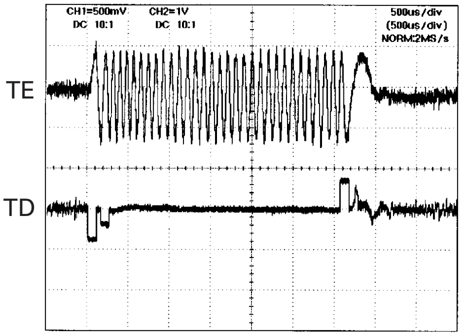


Inner Jump

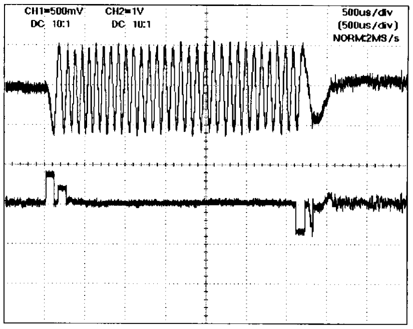


Multi Jump (32 Track)

Outer Jump

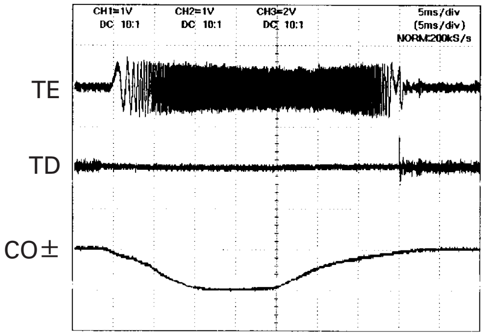


Inner Jump

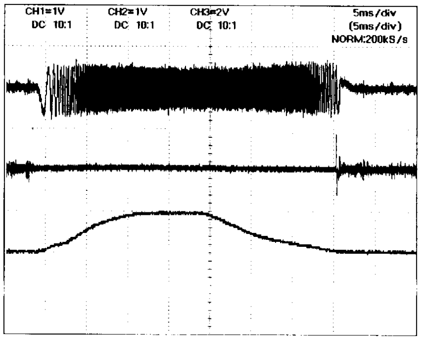


Traverse Seek (501 Track)

Outer Jump

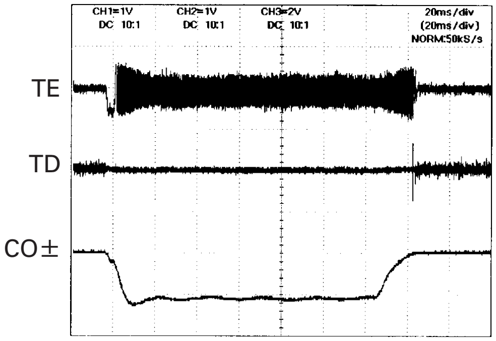


Inner Jump

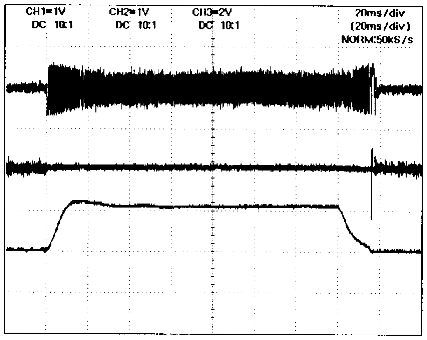


Traverse Seek (5000 Track)

Outer Jump

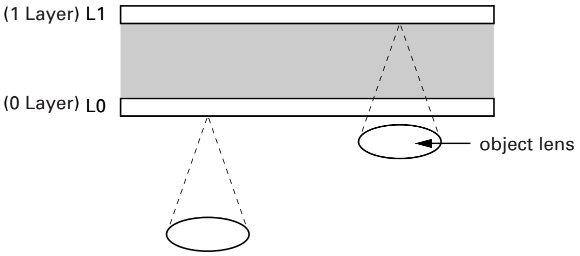


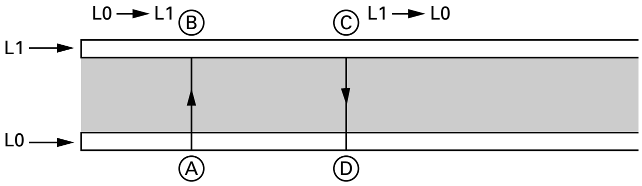
Inner Jump



1.2.4 Focus Jump

Focus jump is a function corresponding to the single-sided or both-sided two-layers.
Seen from the object lens, a forward layer is called 0 Layer (L0) and a farther one is called 1 Layer (L1).

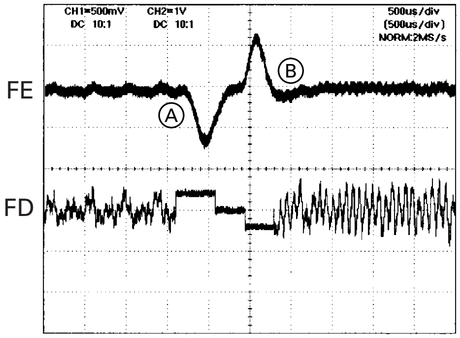




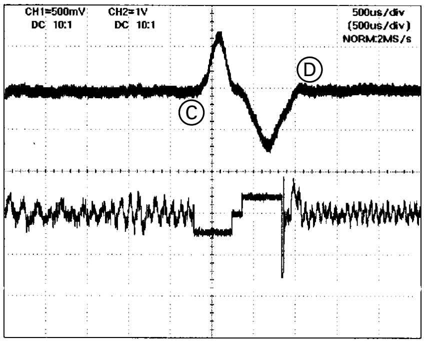
The waveforms of focus jump are shown below.

The waveforms of focus jump

L0→L1



L1→L0



The flow of focus jump is shown below.

1. Open tracking at the layer during play.
2. Issue a command to execute jump to the target layer.
3. At the jumped layer, replay by closing the tracking.

Also, the processes when issuing a jump command are as follows.

1. Accelerate the lens to the target layer until FE signal detects the acceleration completion level for focus jump. However, if the time of acceleration time-out reaches before detecting the acceleration completion level, the acceleration will compulsively stop.
2. Move lens with inertia instead of outputting the drive voltage until FE signal detects the deceleration initiation level.
3. Decelerate lens for the duration from detection of the deceleration initiation level to the deceleration completion level.
   However, if the time of deceleration time-out reaches before detecting the deceleration completion level, the deceleration will compulsively stop.

1.3 Automatic Adjustment Function

This system totally automates the circuit adjustments.
The details of automatic adjustments are explained respectively as follows:

1.3.1 FE, TE, AS and Offset Cancel

Each of analog signals for FE, TE and AS generated at FEP is converted into a digital signal by A/D converter inside servo block. Offset cancel is a function to cancel the input offset of A/D converter when the power is on.

1.3.2 VCO Gain Adjustment (VARI Adjustment)

It has a function to absorb dispersion of VCO gains among LSI solid by learning and to automatically adjust VCO gains for the constant allocation. Lock VCO to 186- multiplied frequency against the input clock of crystal criteria, read Frequency Control Value (FCNT), and then adjust VARI register so that the value becomes equivalent to the target FCNT value.

1.3.3 FE Normalization Adjustment

After A/D-converting FE signal level at servo block which was measured at focus close, adjust it to 190LSB at the digital equalizer input stage.

1.3.4 Spindle Gain Learning

Measure the duration from the halting state of spindle motor to the point reaching the fixed rotation speed for Gain adjustment. Then adjust in the way of absorbing torque dispersion on spindle motor.

1.3.5 Tracking Balance (TBAL) Adjustment

By applying Newton-Raphson method, search for a balanced point at which DC offset becomes 0 by vibrating lens toward track direction at the time of the focus close and the tracking open.

1.3.6 Tracking Error Amplitude Learning

After vibrating lens toward track direction at the time of the focus close and the tracking open to A/D-convert the amplitude level to ADSC, adjust it to 190LSB at the digital equalizer input stage.

1.3.7 Focus Balance (FBAL) Adjustment

Adjust the focus position so that RFENV becomes maximum at the tracking close.

1.3.8 Focus Gain Adjustment and Tracking Gain Adjustment

Insert disturbance to servo loop at the tracking close and adjust to a target gain intersection.

1.3.9 AS Normalization Adjustment

After measuring AS signal levels for the designated number of samplings at the tracking close to A/D-convert by ADSC, the precise adjustment is made to set 64LSB at the digital equalizer input stage.

All automatic adjustments can be confirmed by indicating their results at test mode.

List of Automatic Adjustment Coefficients

States	Coefficients	DVD	CD
Power On	FE Offset	FBF0 ~ 0410	FB5C ~ 04A4
	TE Offset	E8BA ~ 1746	F740 ~ 08C0
	AS Offset	F96D ~ 0693	F6B7 ~ 0949
F Close	Spindle Gain	0121 ~ 02E3	0113 ~ 0447
	FE MAX	1D8B ~ 547E	1D5A ~ 5663
	FE MIN	BADE ~ E7D3	A99D ~ E2A6
	AS MAX	10CB ~ 3753	12E2 ~ 45E4
	FE Normalization	0125 ~ 02FE	0119 ~ 033D
F Close (after TBAL)	TE MAX	1A7C ~ 5ABC	0DB5 ~ 33D6
	TE MIN	A544 ~ E584	CC2A ~ F24B
	TE Normalization	010C ~ 0396	01D5 ~ 06F0
T Close	F Gain	0100 ~ 0400	←
	T Gain	0100 ~ 0400	←
	AS Normalization	0128 ~ 03D0	00EA ~ 0364

Note: Coefficients are indicated in hexadecimal numbers.
All figures describe specifications at the production line.
Disc applies DVD−REF−A1 for DVD and TCD−782 for CD.

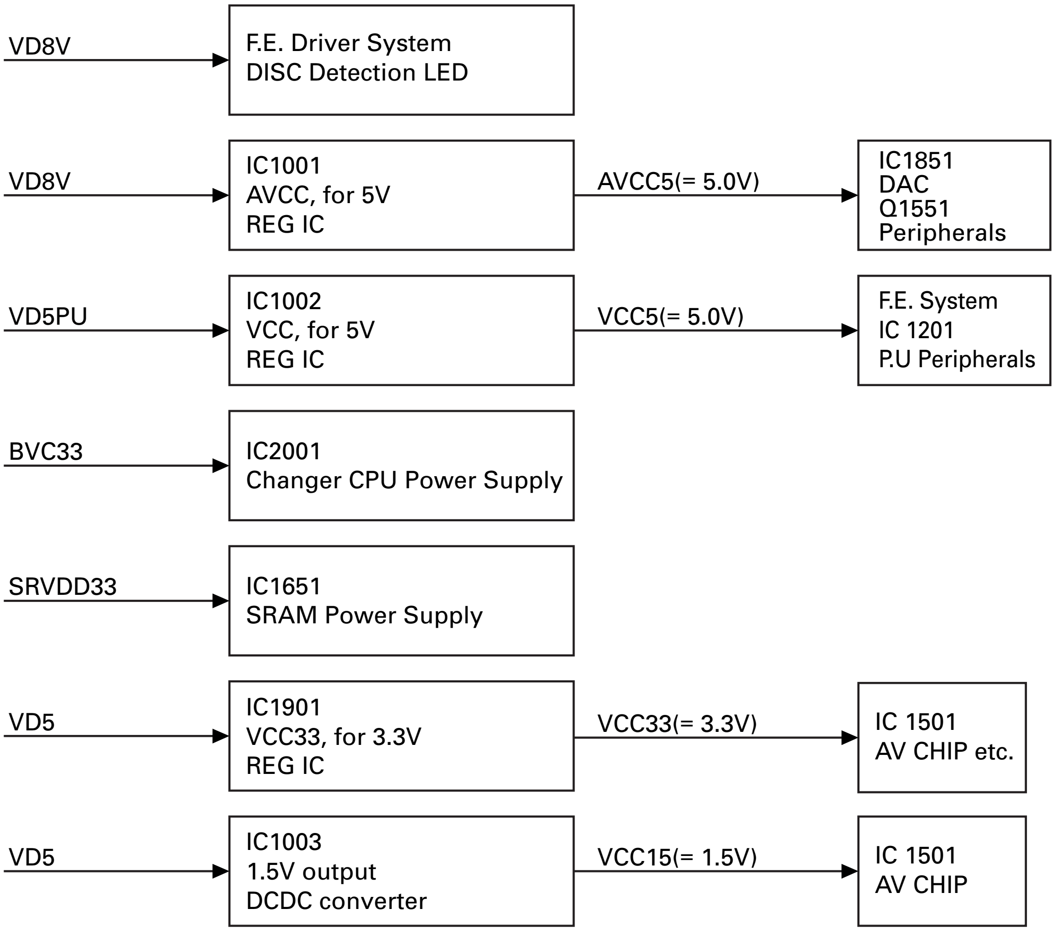
1.4 CIRC Block (MN35103UB, MN35104UB:IC1501)

CIRC block contains digital signal processing function for CD−DA and CD−ROM (EFM demodulation and error correction), digital servo processing for spindle motor and 1-bit DA converter with digital filter (Differential OP amp output with secondary lowpass filter).

1.5 DRC Block (MN35103UB, MN35104UB:IC1501)

Digital Read Channel (DRC) provides A/D converter, adaptive equalization, bit-a-bit detector, digital PLL circuit, CPU interface and peripheral circuits for reading signals of optical disks.

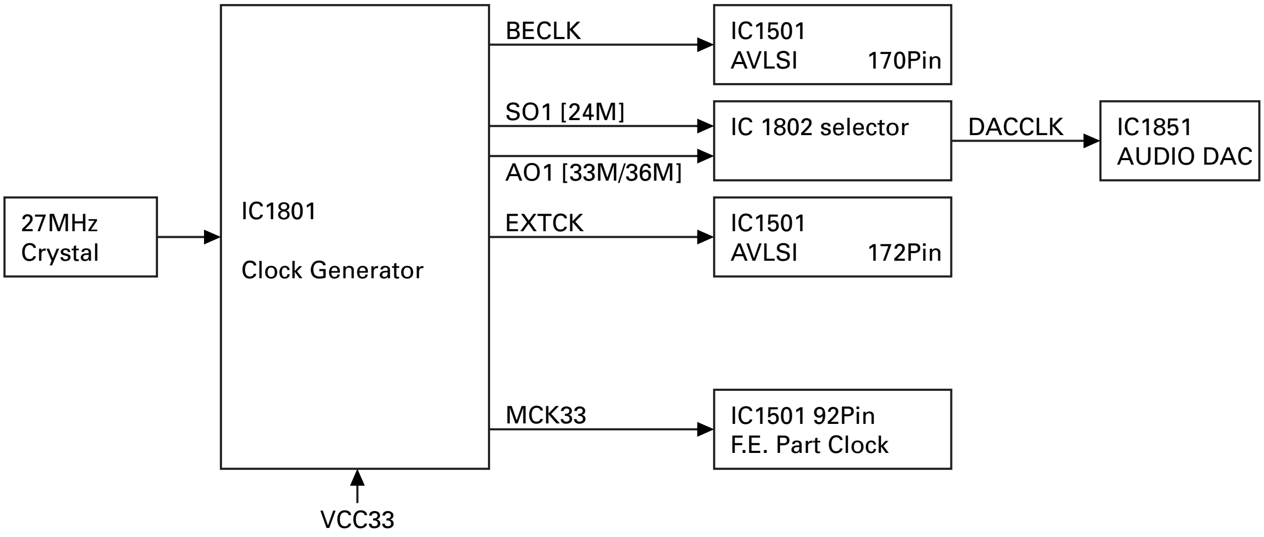
2 Back End Part
2.1 States of Power Supply


VD8V
F.E. Driver System
DISC Detection LED
VD8V
IC1001
AVCC, for 5V
REG IC
AVCC5(= 5.0V)
IC1851
DAC
Q1551
Peripherals
VD5PU
IC1002
VCC, for 5V
REG IC
VCC5(= 5.0V)
F.E. System
IC 1201
P.U Peripherals
BVC33
IC2001
Changer CPU Power Supply
SRVDD33
IC1651
SRAM Power Supply
VD5
IC1901
VCC33, for 3.3V
REG IC
VCC33(= 3.3V)
IC 1501
AV CHIP etc.
VD5
IC1003
1.5V output
DCDC converter
VCC15(= 1.5V)
IC 1501
AV CHIP

States of Power Supply

2.2 States of Clock

Using 27MHz primary crystal (X1801), 27MHz buffer-out (VCLK & BECLK) audio clock (EXTCK & DACCLK [with 24M/33M/36M switches]) and F.E. part clock (MCK33) are produced with IC1801.

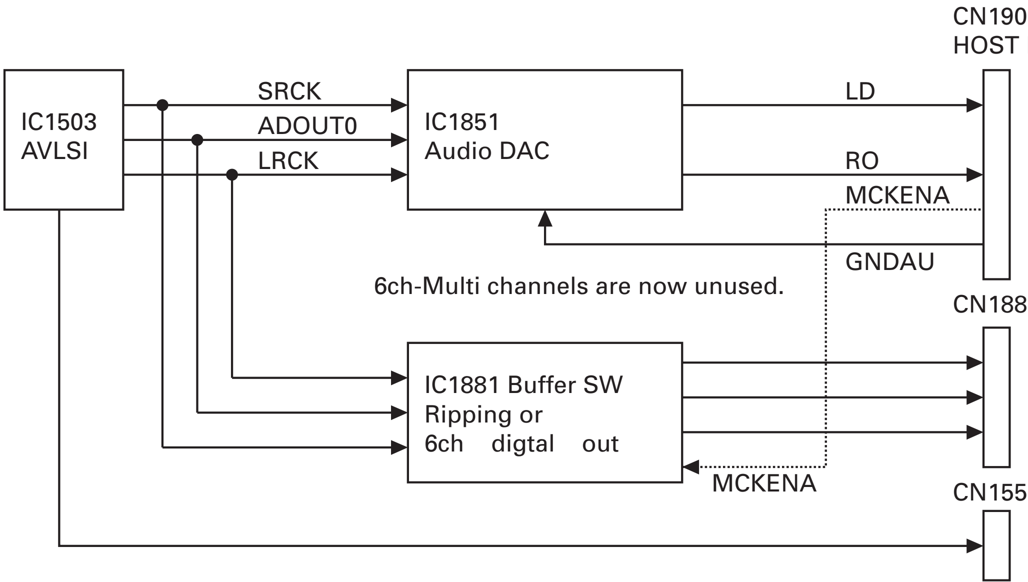

27MHz
Crystal
IC1801
Clock Generator
VCC33
BECLK
IC1501
AVLSI 170Pin
SO1 [24M]
AO1 [33M/36M]
IC 1802 selector
DACCLK
IC1851
AUDIO DAC
EXTCK
IC1501
AVLSI 172Pin
MCK33
IC1501 92Pin
F.E. Part Clock

States of Clock

2.3 Audio Circuit

The serial three lines of audio output from AVLSI is input to IC 1851 (Audio DAC) and the signal that had become analog audio is output from HOST I/F. For mute circuit, only AMUTE can be output at present, and Mute Tr is located at the product side.
As for 6ch output, two kinds, 2ch ripping output type, and 6ch/2ch ripping output combination type, exist by the model.It is decided by product type and specification.

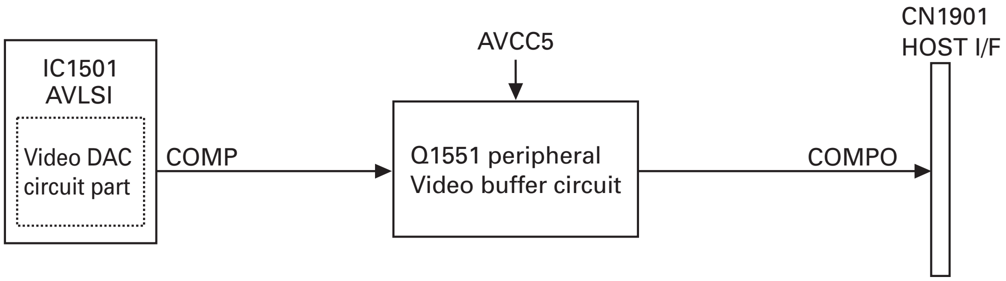
IEC958 (Audio digital output) has what is equipped by the model, and the thing which is not equipped.


CN1901
HOST I/F
IC1503
AVLSI
SRCK
ADOUT0
LRCK
IC1851
Audio DAC
LD
RO
MCKENA
GNDAU
6ch-Multi channels are now unused.
CN1881
IC1881 Buffer SW
Ripping or
6ch digtal out
MCKENA
CN1551

Audio Circuit

2.4 Video Circuit

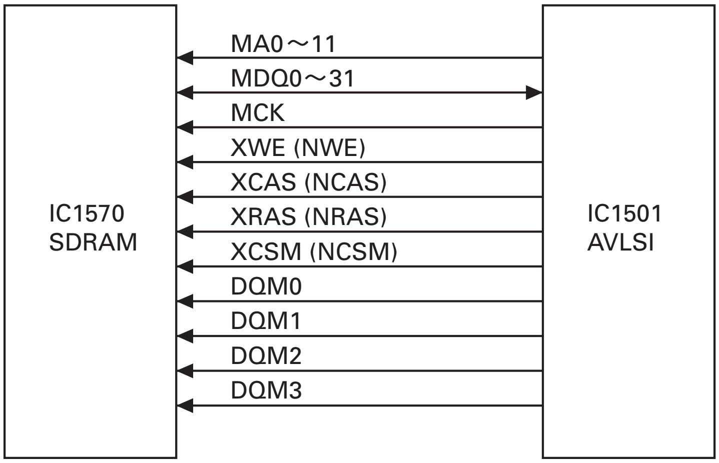
Composite Video Signal is output from DAC circuit part in AVLSI.
Output from HOST I/F via Buffer circuit.


CN1901
HOST I/F
AVCC5
IC1501
AVLSI
Video DAC
circuit part
COMP
Q1551 peripheral
Video buffer circuit
COMPO

Video circuit

2.5 SDRAM I/F

Communication I/F between AVLSI and memory to allocate MPEG stream data as a buffer.
Capacity of SDRAM is 128Mbit.
Note that XCSM, XWE, XCAS, XRAS, XCSM for IC1570 are renamed respectively to NCSM, NWE, NCAS, NRAS, NCSM for IC1501.


IC1570
SDRAM
MA0～11
MDQ0～31
MCK
XWE (NWE)
XCAS (NCAS)
XRAS (NRAS)
XCSM (NCSM)
DQM0
DQM1
DQM2
DQM3
IC1501
AVLSI

SDRAM I/F

3 MECHANISM CONTROL

● Overview

The combination of load/eject operation, camgear motor (operation mode) operation, elevation operation and clamp operation enables the operation as changer mechanism module.

3.1 Loading system

Disc position is detected with 3 switches attached to mechanism unit, photo, and LED, and load/eject is performed by driving an E/L motor. *E/L is abbreviation of Elevation/Loading. (MG4 mechanism shares a motor like G3 mechanism, unlike G2 or MG3 mechanism.)

3.1.1 Detect system

The 3 switches, photo and LED operate load start/load end, disc form detection and watching disc eject.

3.1.2 Drive system

Controlling an E/L motor by the control unit enables the following function:

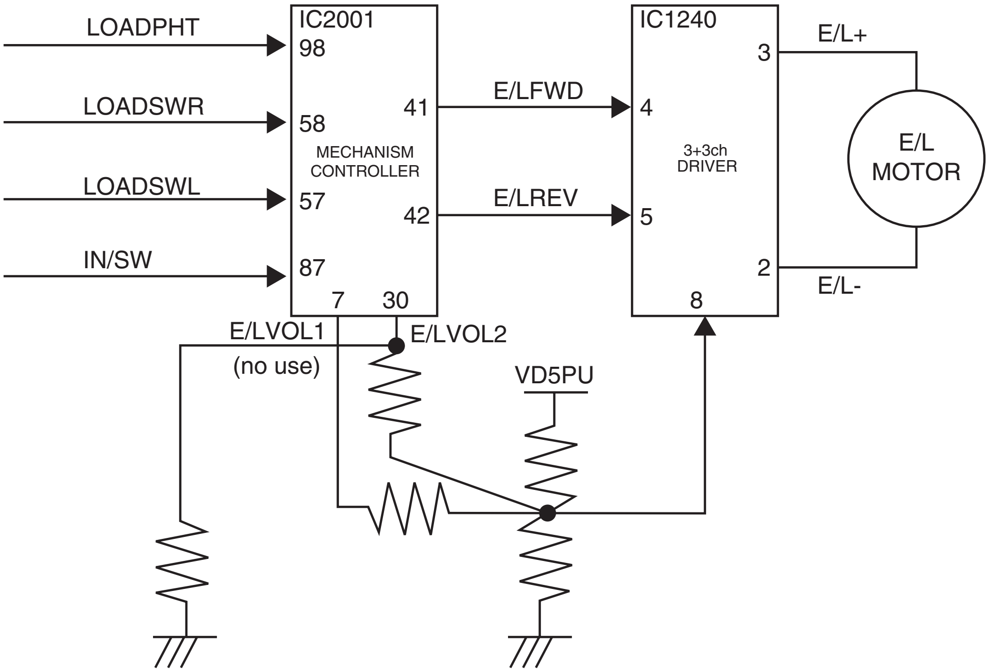
Loading of disc
Ejecting of disc

a) Drive system

It controls drive direction by output E/LFWD, E/LREV from the microcomputer (IC2001), and 3 values of drive voltage by Hi-Z/H/L of E/LVOL2.

At the time of loading E/L+<E/L- ; (E/LFWD; L, E/LREV; H)
At the time of ejecting E/L+>E/L- ; (E/LFWD; H, E/LREV; L)

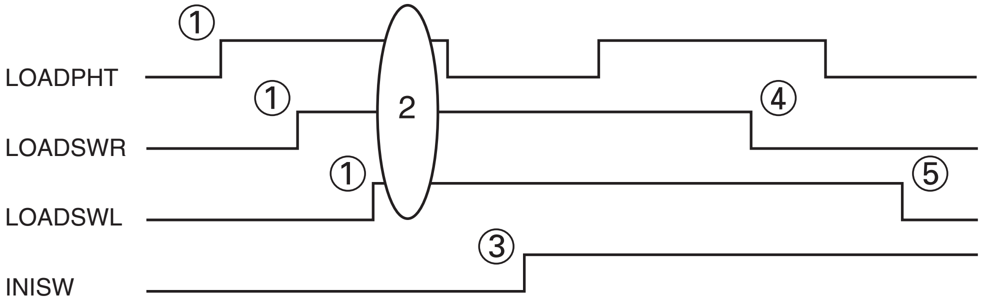
Drive voltage (E/LVOL2=Hi-Z) ; 7.9V
Drive voltage (E/LVOL2=H) ; 7V
Drive voltage (E/LVOL2=L) ; 4.8V


LOADPHT
LOADSWR
LOADSWL
IN/SW
IC2001
98
58
57
87
41
42
7
30
MECHANISM CONTROLLER
E/LFWD
E/LREV
IC1240
4
5
3
2
8
3+3ch DRIVER
E/L+
E/L-
E/L MOTOR
E/LVOL1
(no use)
E/LVOL2
VD5PU

b) Drive sequence

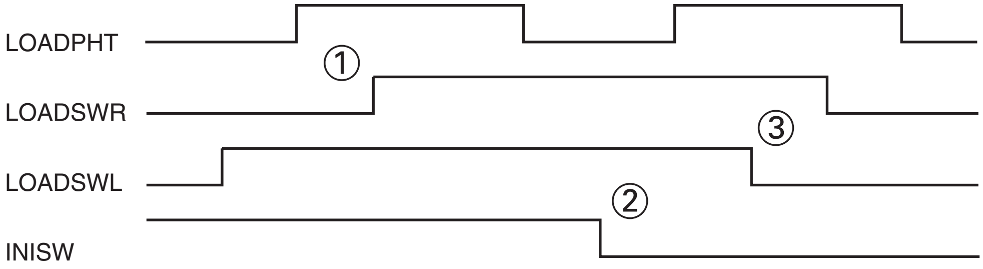
At the time of loading:

① One of LOADPHT, LOADSWR, LOADSWL starts driving with H. ② All of LOADPHT, LOADSWR, LOADSWL detect H at the same time. ③ Detecting H of INISW. ④ Detecting L of LOADSWR. ⑤ Detecting L of LOADSWL and stopping E/L motor.



At the time of ejecting:

① Starting driving H of LOADSWR. ② Detecting L of INISW.
③ Detecting L of LOADSWL and after reverse brake (16ms), stopping E/L monitor.

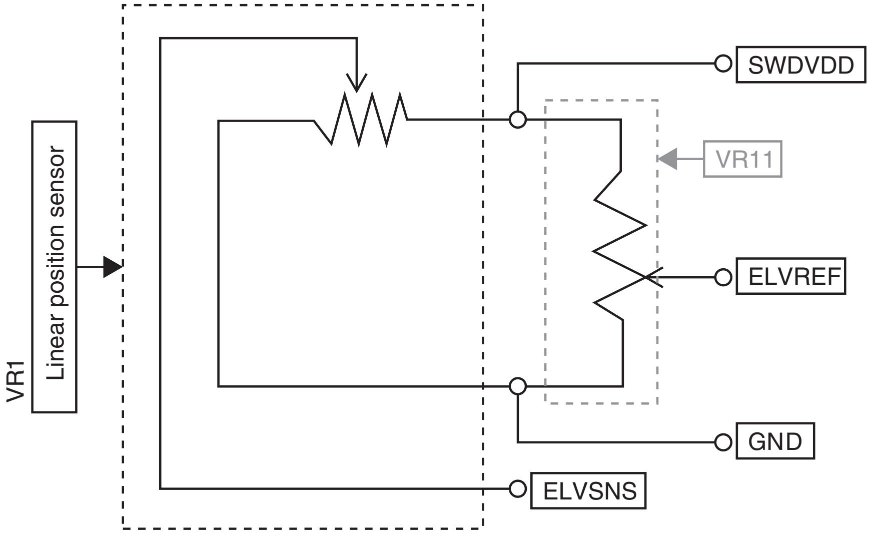


3.2 Elevation system

3.2.1 Detect system

It uses a linear position sensor (VR1), converts stage chassis level to voltage value and captures it by a microcomputer A/D to detect absolute position.

Detect circuit



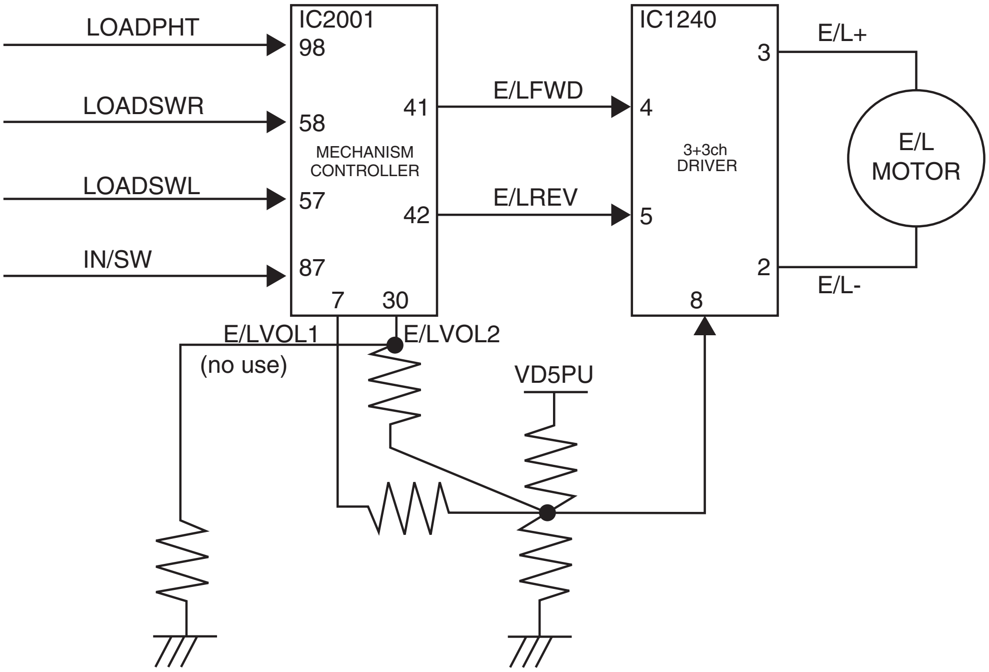
3.2.2 Drive system

Controlling an E/L motor by the control unit enables the following function.
 Elevation function

a) Drive circuit

t controls drive direction by output E/LFWD, E/LREV from the microcomputer (IC2001), and 3 values of drive voltage by Hi-Z/H/L of E/LVOL2.

Driving upper direction E/L+>E/L-, (E/LFWD; H, E/LREV; L)
Driving lower direction E/L+<E/L-, (E/LFWD; L, E/LREV; H)
Drive voltage (E/LVOL2=Hi-Z); 7.9V
(E/LVOL2=H); 7V (E/LVOL2=L); 4.8V


LOADPHT
LOADSWR
LOADSWL
IN/SW
IC2001
98
58
57
87
41
42
7
30
MECHANISM CONTROLLER
E/LFWD
E/LREV
IC1240
3+3ch DRIVER
4
5
3
2
8
E/L+
E/L-
E/L MOTOR
E/LVOL1
(no use)
E/LVOL2
VD5PU

b) Drive sequence

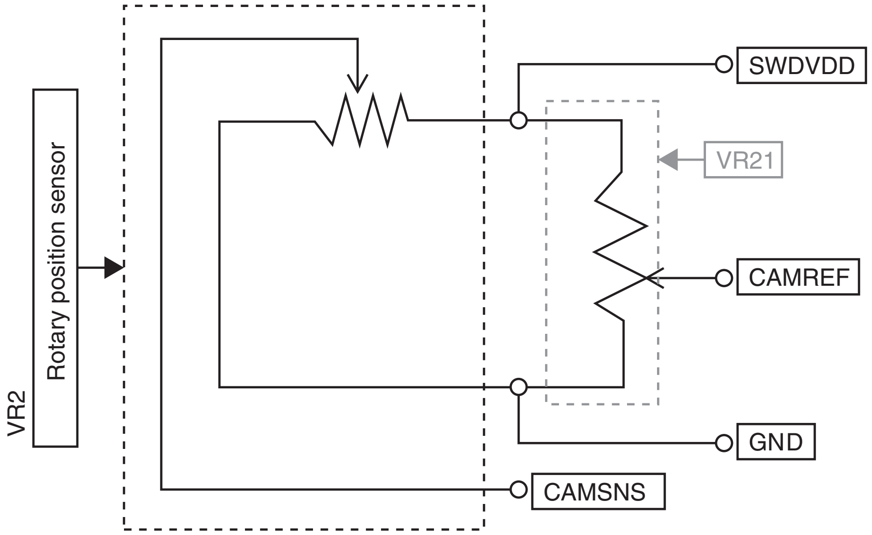
1 Driving continuously to the position of brake start.
2 Detecting of passing the position of brake start and starting short brake.
3 Starting of driving pulse to reach OK range. After confirmation of entering OK range, it is completed.

3.3 Camgear motor system

3.3.1 Detect system

It uses a rotary position sensor (VR2), converts a camgear rotation angle to voltage value and captures it by a microcomputer A/D to detect absolute position.

Detect circuit



Rotary position sensor
VR2
SWDVDD
VR21
CAMREF
GND
CAMSNS

3.3.2 Drive system

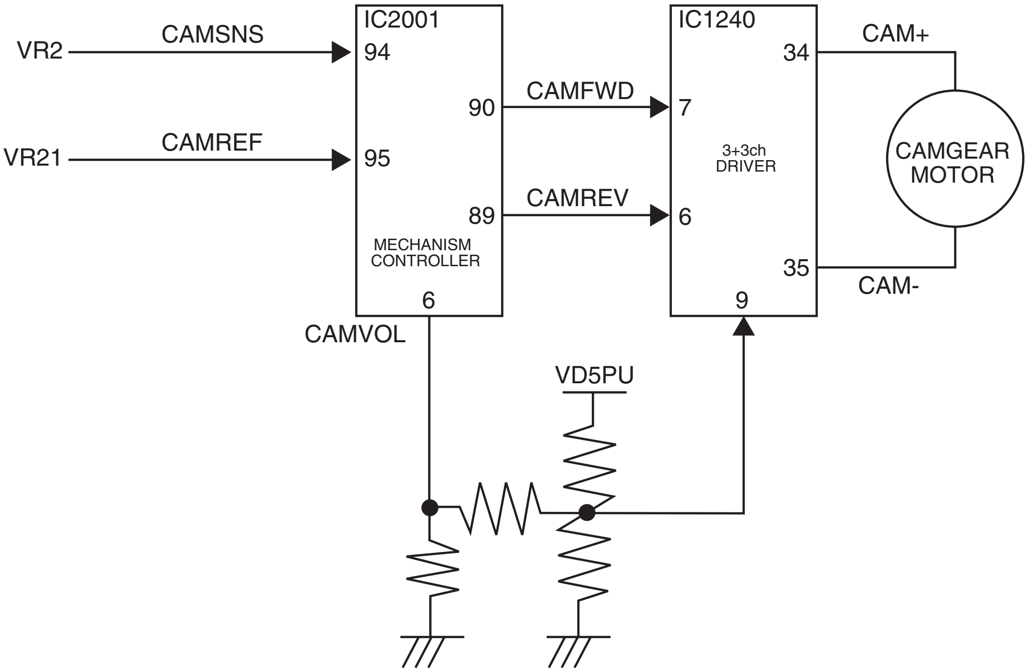
Controlling a cam gear motor by the control unit enables the following function:

Open/close of shutter
Open /close of tray tab
Division of tray
Rotation operation of CRG chassis
 (moving to the play position)
Release of mechanism lock
Drive of eject arm

a) Drive circuit

It controls drive direction by output CAMFWD and CAMREV from the microcomputer (IC2001), and two values of drive voltage by Hi-Z/H of CAMVOL.

Driving CRG chassis to the outer direction
(direction of EJECT position)
AM+>CAM-; (CAMFWD; H, CAMREV; L)
Driving CRG chassis to the inner direction
(direction of PLAY position)
CAM+<CAM-; (CAMFWD; L, CAMREV; H)
Drive voltage CAMVOL=Hi-Z; 8V
CAMVOL=H; 7V


VR2
CAMSNS
VR21
CAMREF
IC2001
94
95
90
89
MECHANISM CONTROLLER
6
CAMVOL
CAMFWD
CAMREV
IC1240
7
6
3+3ch DRIVER
34
35
9
CAM+
CAM-
CAMGEAR MOTOR
VD5PU

b) Drive sequence

1 Driving continuously to the position of brake start.
2 Detecting of passing the position of brake start and starting short brake or reverse brake.
3 Starting of driving pulse to reach OK range. After confirmation of entering OK range, it is completed.

3.4 SPDL clamp system

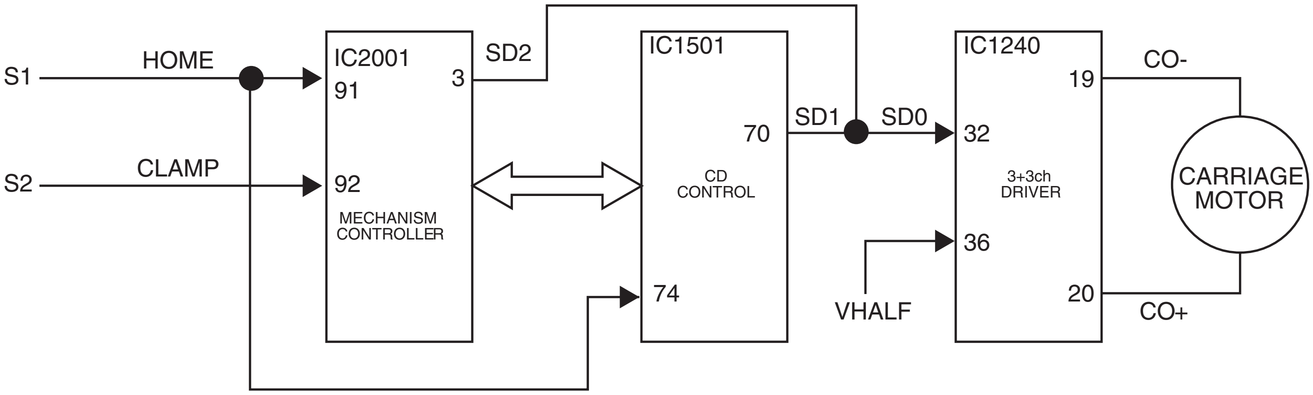
3.4.1 Detect system

It is composed of two switches such as HOME switch used in servo system (S1) and CLAMP switch (S2) for checking a shutter of the tab inside it.

3.4.2 Drive system

It operates a pickup unit to move to inner side from normal replay position and moves clamp mechanism of a DISC.

a) Drive circuit


S1
HOME
S2
CLAMP
IC2001
91
92
3
SD2
MECHANISM CONTROLLER
IC1501
70
74
CD CONTROL
SD1
SD0
IC1240
32
36
19
20
3+3ch DRIVER
VHALF
CO-
CO+
CARRIAGE MOTOR

2. MECHANISM OVER VIEW

2.1 STRUCTURE OF MECHANISM AND OPERATION OF COMPONENTS

The mechanism consists of three blocks, i.e., a main chassis, which is the base of the entire mechanism, stage and tray. Various kinds of operations are performed according to how those blocks are positioned in relation to one another.

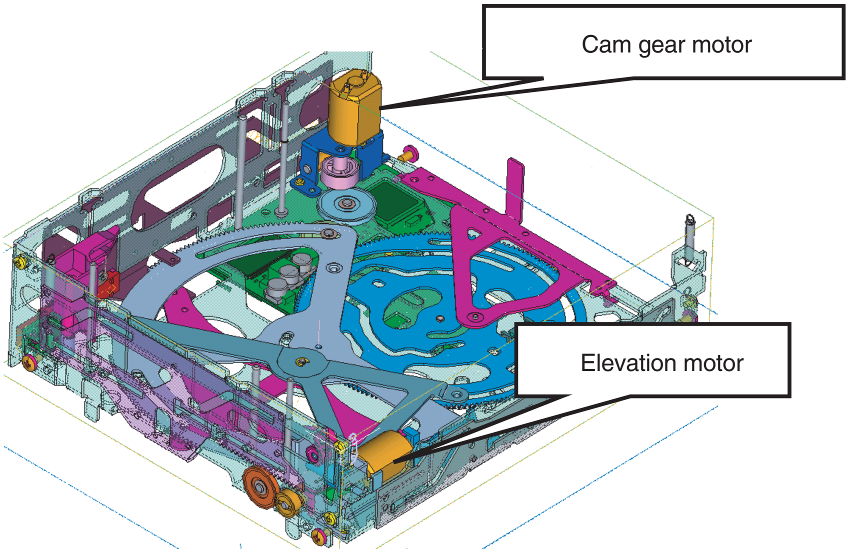
The stage block consists of CRG, stage and loading unit; and the loading unit moves up and down with the stage block. The stage block is joined to the main chassis section with a stair and link lever. Sliding the stair moves the entire stage block moves up and down. Moving the link lever allows the CRG to rotate to play a disc. The tray block consists of six trays. Similarly to the stage block, the tray block moves up and down as the stair slides.

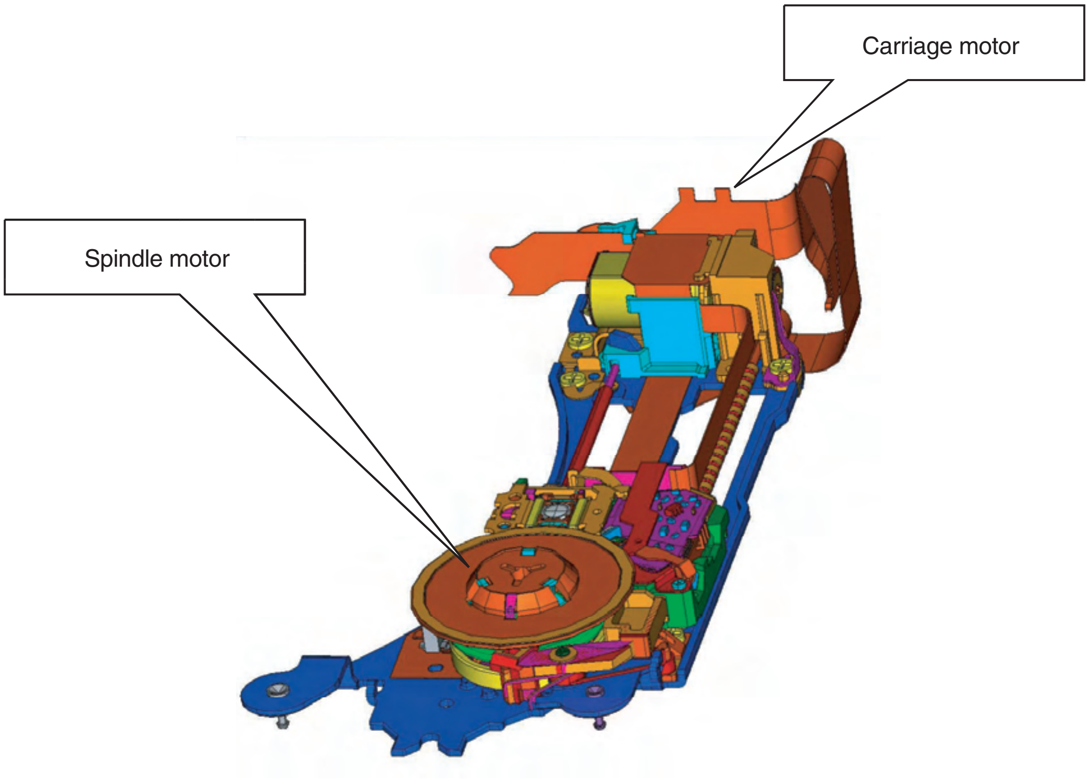
To play the disc, the stage block moves toward the tray block at a location where the disc can be played. Then, the tray group is separated by the action of cylindrical cams, the CRG is inserted and the disc is clamped.

To load or eject the disc, the stage block moves to its lower end. Then, the tray block moves the target disc to a location where the disc can be loaded or ejected. The tray group is separated by the action of cylindrical cams. Then, the disc is loaded or ejected.

To carry out the aforementioned operation, the mechanism is provided with four motors. The operations listed in the table below are carried out by using the motors as a motive power.

Cam gear motor	Tray separation operation Carriage mechanism assembly rotation operation Eject arm operation Shutter opening/closing operation Tray claw opening/closing operation
Elevation motor	Elevation operation Loading/ejection rollers rotation operation
Carriage motor	Search operation
Spindle motor	Disc clamp claw opening/closing operation Disc rotation operation



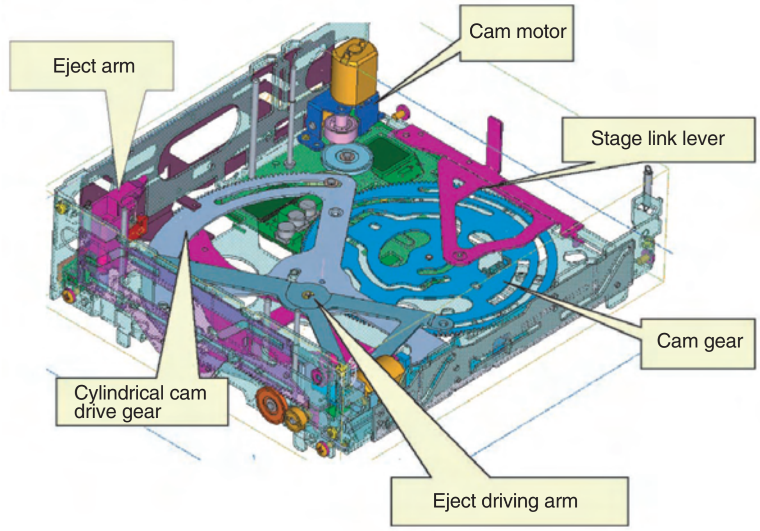

Carriage motor
Spindle motor

The operations carried out using the motors as a motive power are described below.

2.2 CAM GEAR MOTOR (OPERATION OF THE CAM)

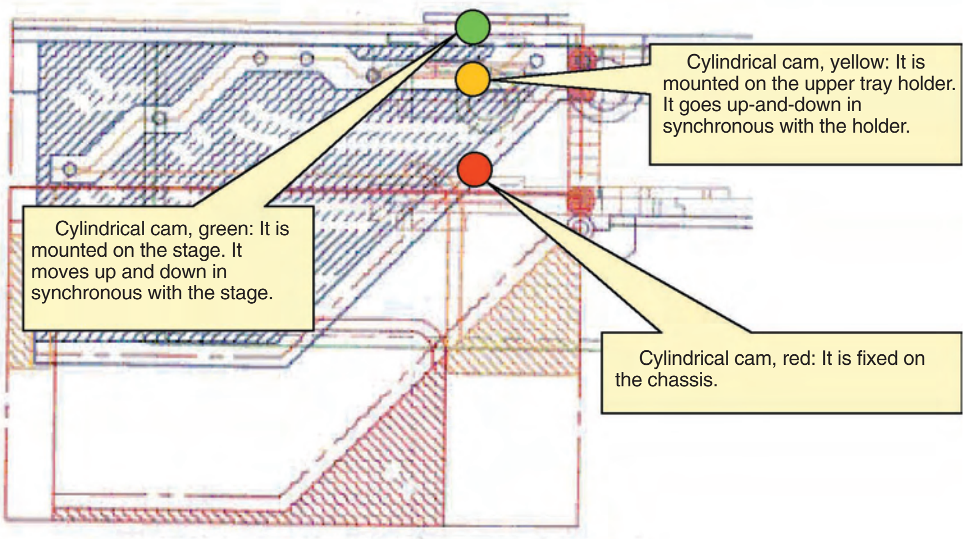
The following five operations are carried out by using the rotary motions of the cam gear motor as a motive power.

a.Tray separation operation
b.Tray claw opening/closing operation
c.Carriage mechanism assembly rotation operation
d.Eject arm operation
e.Shutter opening/closing operation


Eject arm
Cam motor
Stage link lever
Cam gear
Cylindrical cam drive gear
Eject driving arm

a.Tray separation operation

The rotary motion of the cam gear motor is transferred to the cylindrical cams by way of its cam. The tray is separated by rotations of the cylindrical cams. This makes a space into which the CRG is inserted when playing the disc. The mechanism of the cylindrical cams to separate the tray is as shown below.



Cylindrical cam, yellow: It is mounted on the upper tray holder. It goes up-and-down in synchronous with the holder.

Cylindrical cam, green: It is mounted on the stage. It moves up and down in synchronous with the stage.

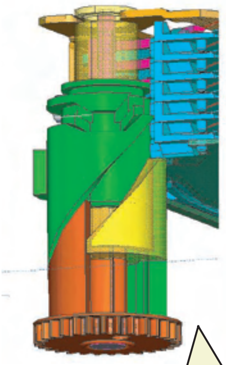
Cylindrical cam, red: It is fixed on the chassis.

Cylindrical cam, green: Used to select a target tray

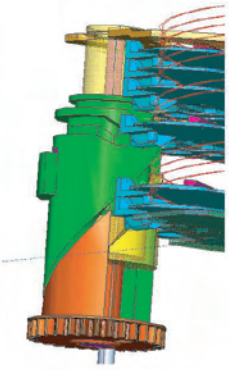
Cylindrical cam, yellow: Used to support the tray at the time of loading a disc

Cylindrical cam, red: Used to support the tray at the time of playing a disc

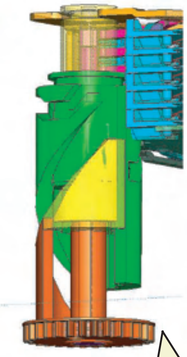
In addition, the appearance of trays being separated at the time of loading or playing disc #3 is shown below as an example.



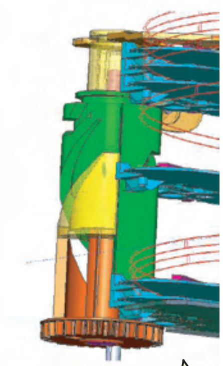
3F ELEV O.K.
(LOAD)
Stage 1F
Tray group 3F



DISC#3 LOAD
Stage 1F
Tray group 3F



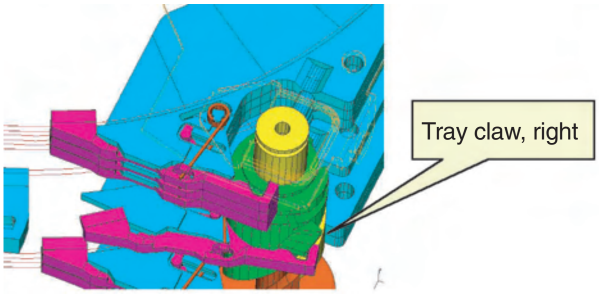
3F ELEV O.K.
(PLAY)
Stage 3F
Tray group 1F

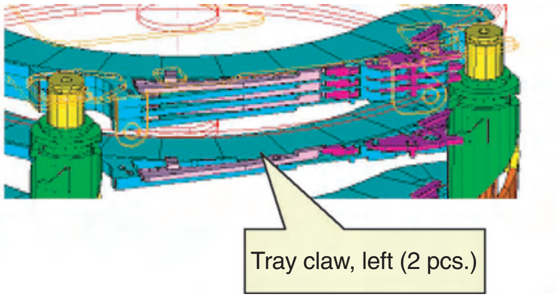


DISC#3 PLAY
Stage 3F
Tray group 1F

b.Tray claw opening/closing operation

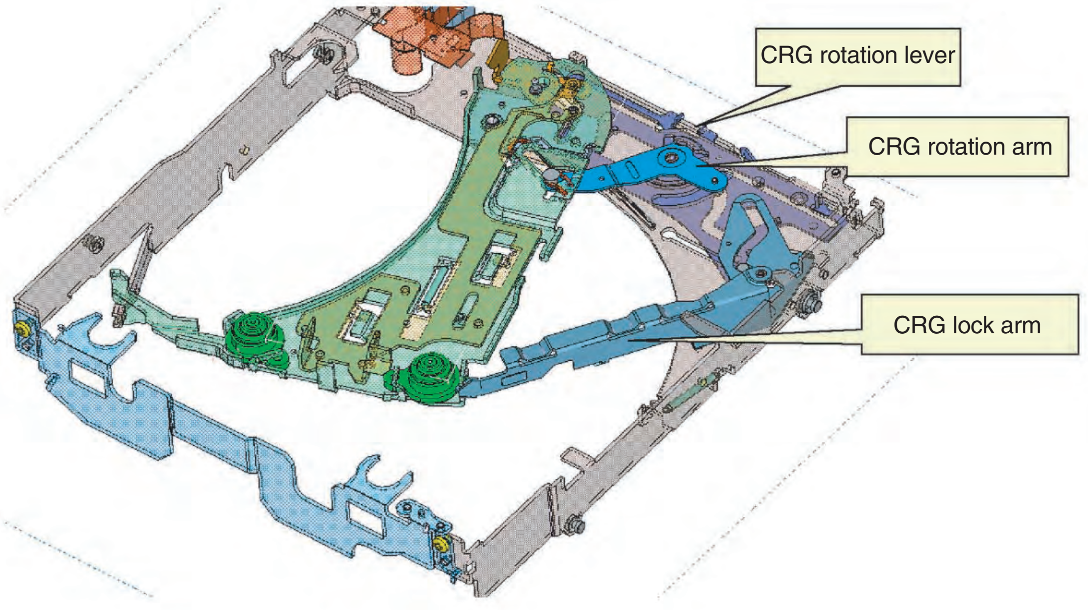
To prevent a disc from dropping, each tray is provided with three claws for clamping the disc. When the cylindrical cams rotate, the tray is separated and tray claws are simultaneously opened/closed.


Tray claw, right


Tray claw, left (2 pcs.)

c.Carriage mechanism assembly rotation operation

D stage link lever and CRG rotating lever are in mesh with each other. The CRG block rotates to travel to the disc playing position in synchronous with the stage link lever movements. The CRG block is fixed with the CRG lock arm and other components at the disc playing position.

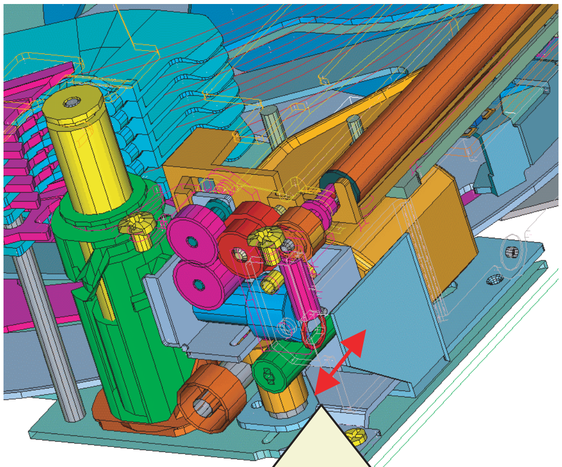

CRG rotation lever
CRG rotation arm
CRG lock arm

d.Eject arm operation

At the time of ejecting a disc, the eject arm is rotated by the force transferred from the eject driving arm to push the disc out.

e.Shutter opening/closing operation

ELEV 2 gear is slid by the force transferred from the eject driving arm. At the same time, the shutter, which protects the disc insertion slot engaged with the ELEV 2 gear unit, opens/closes.



ELEV 2 gear unit :
It slides by the force transferred from the eject driving arm.

2.3 ELEVATION MOTOR

The following two operations are carried out using rotations of the elevation motor as a motive power.

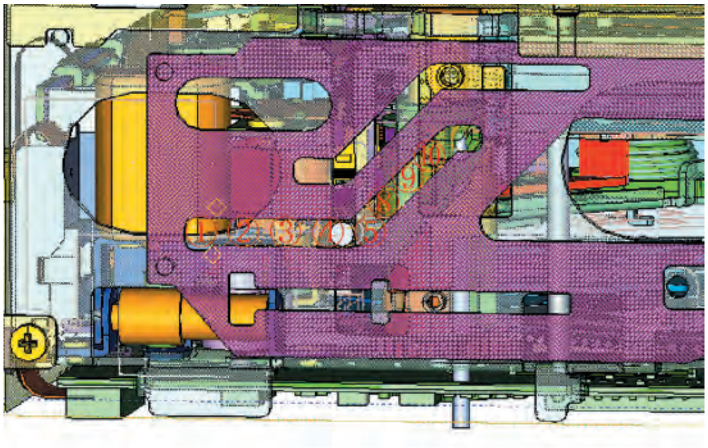
a.Elevation operation
b.Load/eject roller rotation

a.Elevation operation

Where the ELEV O.K. state, the stair is slid by rotations of the elevation motor. The stair is in mesh with the tray block and stage block. Therefore, the tray block and stage block move up and down in synchronous with the stair sliding.

The tray block and stage block change their positions among the following 11 ones according to a change in the stair position. The stair position is detected by the linear position sensor.

Stair position	Stage block	Tray block
①	1F	6F
②	1F	5F
③	1F	4F
④	1F	3F
⑤	1F	2F
⑥	1F	1F
⑦	2F	1F
⑧	3F	1F
⑨	4F	1F
⑩	5F	1F
⑪	6F	1F



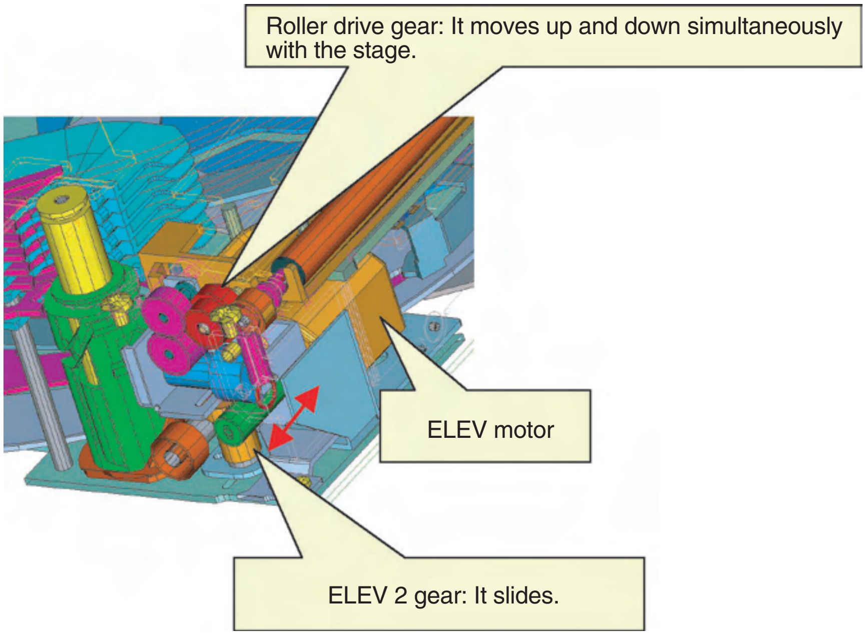
When the stair is located at one of positions ① to ⑥ the stage does not move up and down but stays at 1F. In this case, the tray group moves up and down to select a disc. To load or eject a disc, the stair should be located at one of those positions.

When the stair is located at one of positions ⑥ to ⑪ the tray group does not move up and down but stays at 1F. In this case, the stage moves up and down to select a disc. To play a disc, the stair should be located at one of those positions.

a.Elevation operation

When the stage is on its lowest layer, the roller drive gear joins the row of gears of the elevation motor. As a result, the load/eject roller rotates as the elevation motor rotates. This draws/ejects a disc.

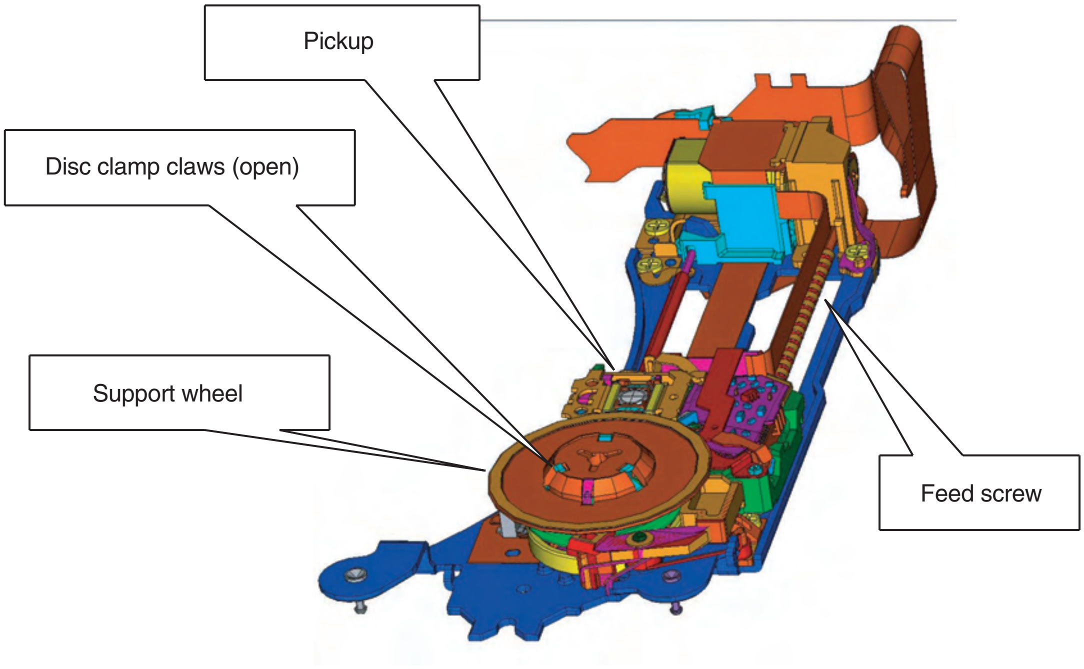
At the time of loading/ejecting a disc, the ELEV 2 gear slides to separate the row of gears which transfers the stair force. Therefore the stair does not move.


Roller drive gear: It moves up and down simultaneously with the stage.
ELEV motor
ELEV 2 gear: It slides.

2.4 CARRIAGE MOTOR AND SPINDLE MOTOR

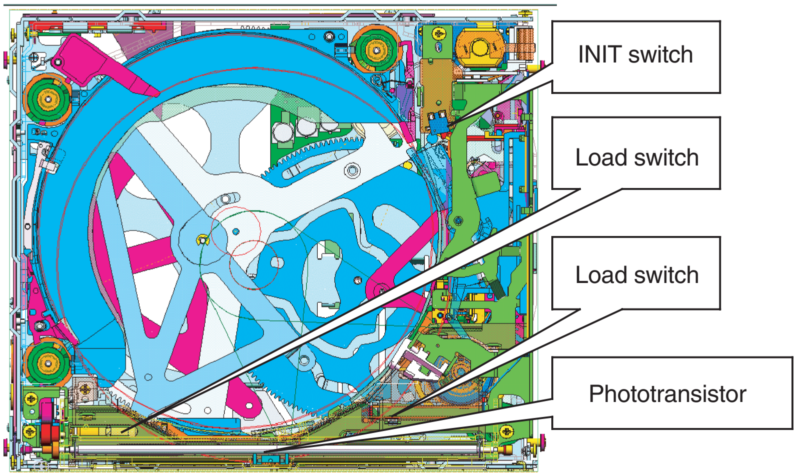
When playing a disc, the spindle motor works to rotate the disc. Search operation is carried out by reducing the rotating speed of the carriage motor with a worm and driving the feed screw.

At the time of playing, the disc is clamped with the three claws. The claws open to unclamp the disc when the support wheel mechanism shifts the pickup to the support wheel, or the claws close to clamp it for the search operation.

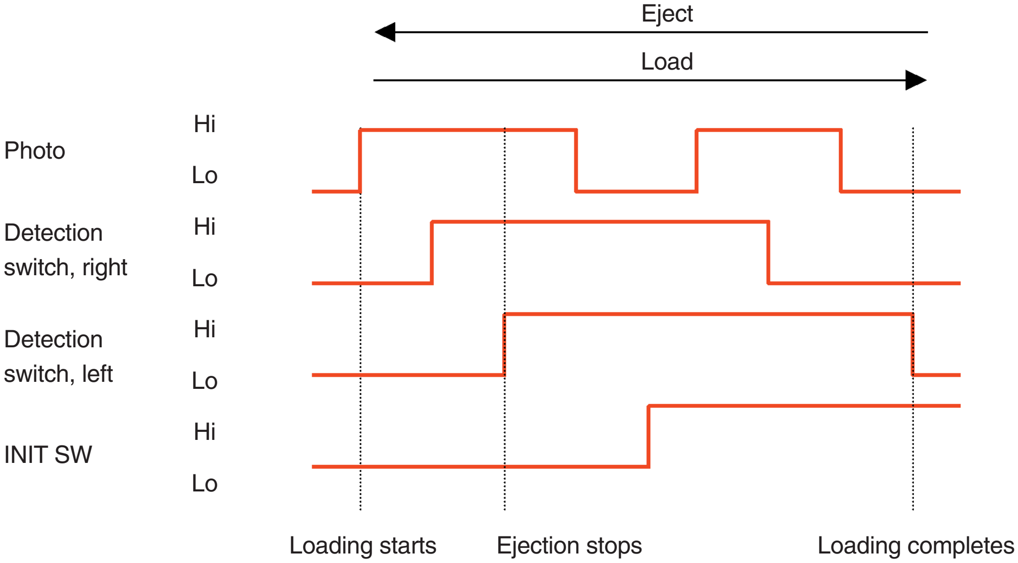

Pickup
Disc clamp claws (open)
Support wheel
Feed screw

2.5 DETECTION OF A DISC BY SENSORS AT THE TIME LOADING

A disc is detected by a phototransistor, right and left load switches and INIT switch.
Phototransistor: Light emitted by the LED mounted on the underside of the roller is reflected by the lighting conductor on the shutter. When the light is shielded by the disc, the phototransistor is brought to its Hi status.
Load switch, right: It is mounted on the right side of the disc insertion slot. When the white resin lever is pressed to the right by the disc, the switch is brought to its Hi status.
Load switch, left: It is mounted on the left side of the disc insertion slot. When the white resin lever is pressed to the left by the disc, the switch is brought to its Hi status.
INIT switch: It is mounted at the right back of the stage. When the resin arm moves from its home position, the switch is brought to its Hi status.



The group of sensors recognizes the disc state as shown below.



2.6 OPERATIONS OF THE MECHANISM

The following operations are described below based on the explanation of a series of combined operations of the elements given above.

Initial operation of the mechanism
Loading operation
Ejection operation
Play operation

2.6.1 Initial operation of the mechanism

When the power is turned on, the mechanism starts initialization. It checks all trays starting from #6 for the presence of discs. The mechanism recognizes the tray(s) which currently has a disc.

2.6.2 Loading operation

Operation sequence from the ELEV O.K. state to the loading of a disc is carried out as described below:

① Tray into which a disc is to be ejected is selected by moving the tray group up and down by the elevation operation.
② Tray separation and shutter opening actions are taken simultaneously by the cam operation.
③ When the user inserts a disc into the selected tray, the phototransistor detects the inserted disc.
④ The disc is drawn inside by rotary motions of the roller.
⑤ The disc drawn into the predetermined position is detected.

2.6.3 Ejection operation

Operation sequence from the ELEV O.K. state to the ejection of a disc is carried out as described below:

① Tray from which a disc is to be inserted is selected by moving the tray group up and down by the elevation operation. The tray from which the disc is to be ejected moves to the disc insertion slot.
② Tray separation and shutter opening actions are taken through the cam operation. Then, the eject arm actuates to push the disc forward. At the same time, the roller starts rotating.
③ The disc is ejected by rotary motions of the roller.
④ It is detected that the user draws out the disc from the slot.
⑤ The steps ① and ② are carried out in reverse order by the cam operation. This closes the shutter.

2.6.4 Play operation

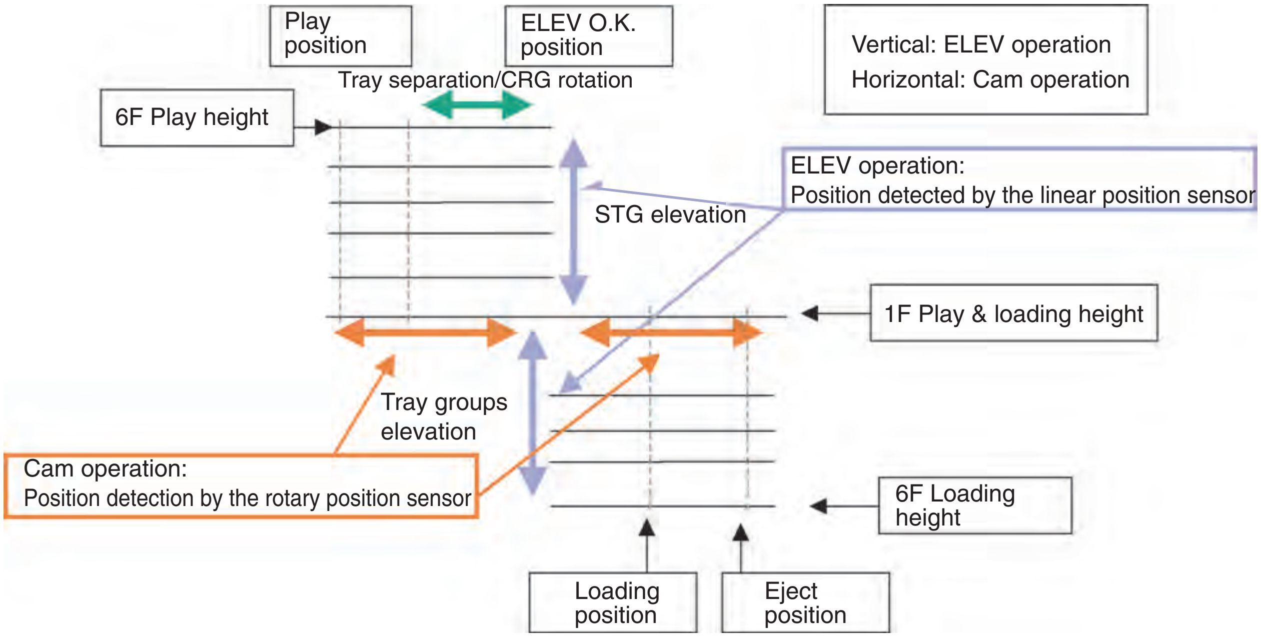
Operation sequence from the ELEV O.K. state to the play state is carried out as described below:

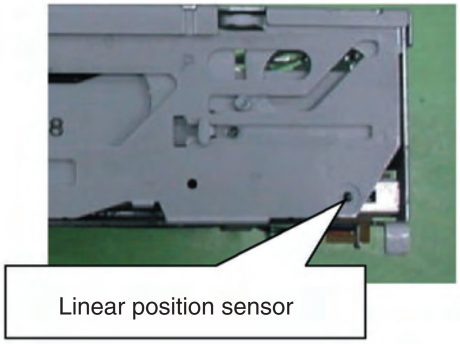
① The stage moves to the position of the tray which has the disc to be played by the ELEV operation.
② Tray separation and CRG rotation actions are taken by the cam operation.
③ The disc is clamped.

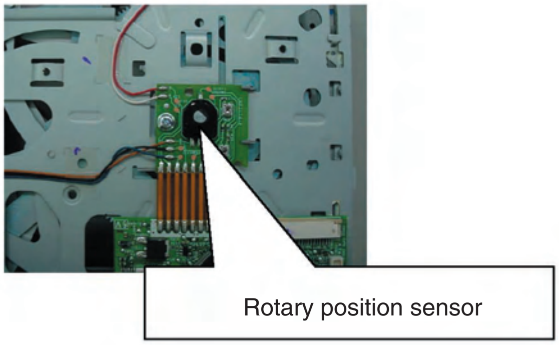
The aforementioned operation sequence is reversed to shift from the play state to the ELEV O.K. state.

Disc changing is carried out by shifting from the current play state to the ELEV O.K. state once, then shifting to the next play state. For example, to change the disc 1 to disc 6, the disc 1 play status is shifted to the ELEV O.K. status first, then the ELEV O.K. state is shifted to the disc 6 play state.

The mechanism state transition diagram is given below. Transition of the state of stage and tray group by the elevation operation is presented in vertical direction of the diagram. Transition of the state of tray separation and CRG position by the cam operation is presented in horizontal direction of the diagram. As shown in the diagram, the position of tray group and stage at the time of loading and ejection is same with that at the time of play only in the case of the disc 1.


Play position
ELEV O.K. position
Vertical: ELEV operation
Horizontal: Cam operation
Tray separation/CRG rotation
6F Play height
ELEV operation:
Position detected by the linear position sensor
STG elevation
1F Play & loading height
Tray groups elevation
Cam operation:
Position detection by the rotary position sensor
6F Loading height
Loading position
Eject position

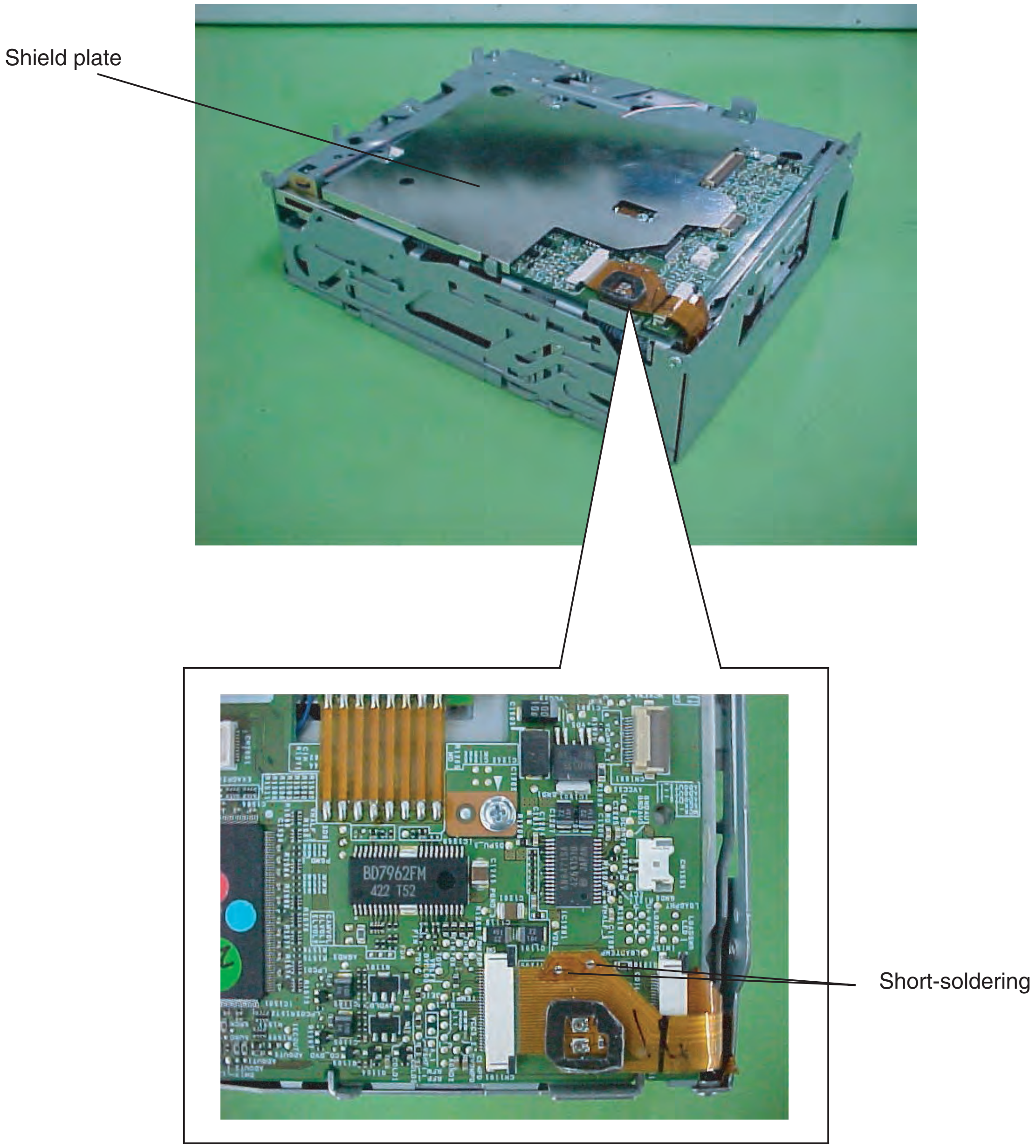

Linear position sensor


Rotary position sensor

3. DISASSEMBLY

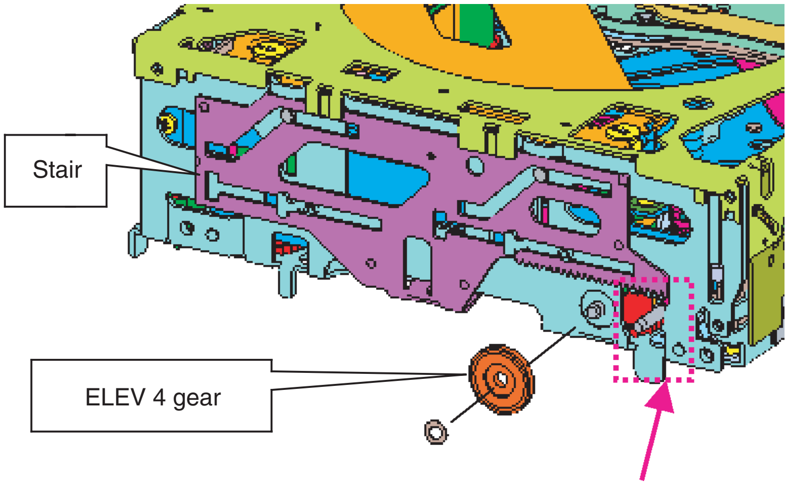
3.1 PREPARATION FOR REMOVAL

① Place the mechanism in the ELEV O.K. state.
② Eliminate static electricity with a wrist band, etc.
③ Carry out short-soldering. (There are two points to be short-soldered. It is enough to solder one of them.)
④ Slide the lock section of the connector to fix a flexible cable and remove a flexible cable. (2 points)


Shield plate
BD7962FM
422 T52
Short-soldering

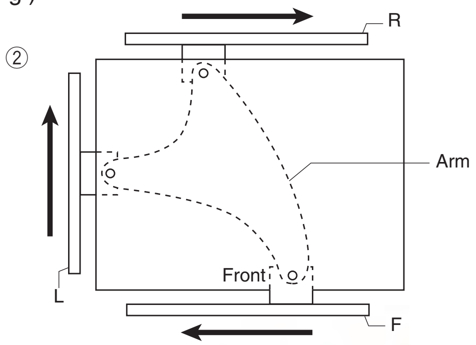
3.2 HOW TO REMOVE THE UPPER CASE

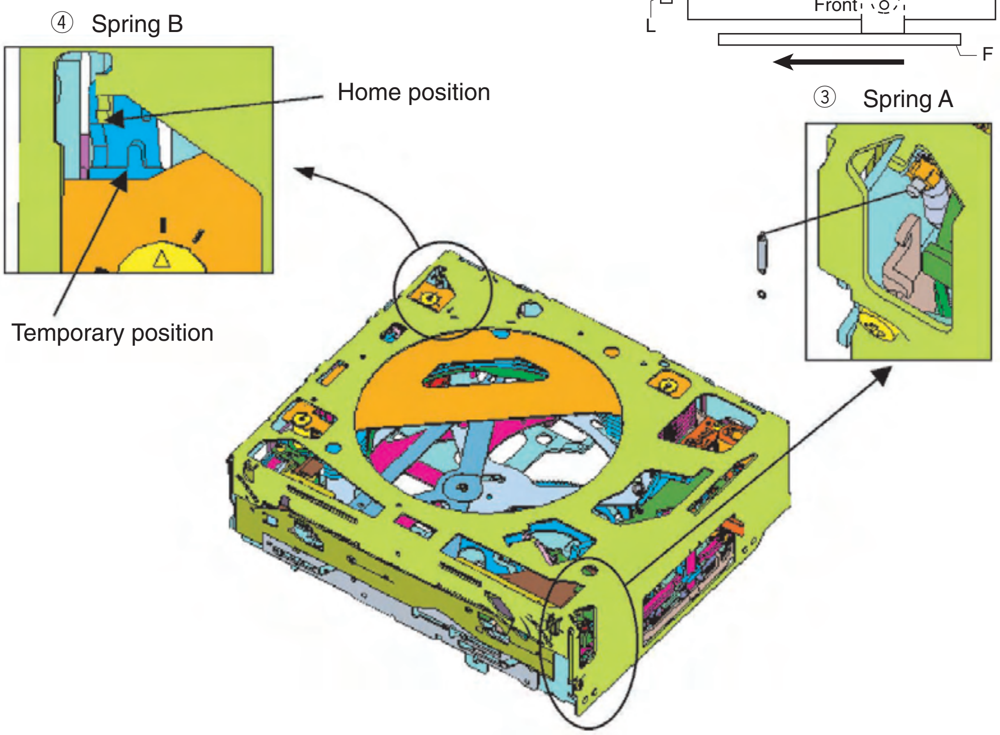
① Remove poly washer. Remove the ELEV 4 gear.
Once the ELEV 4 gear is removed, the stair can be slid as desired.


Stair
ELEV 4 gear

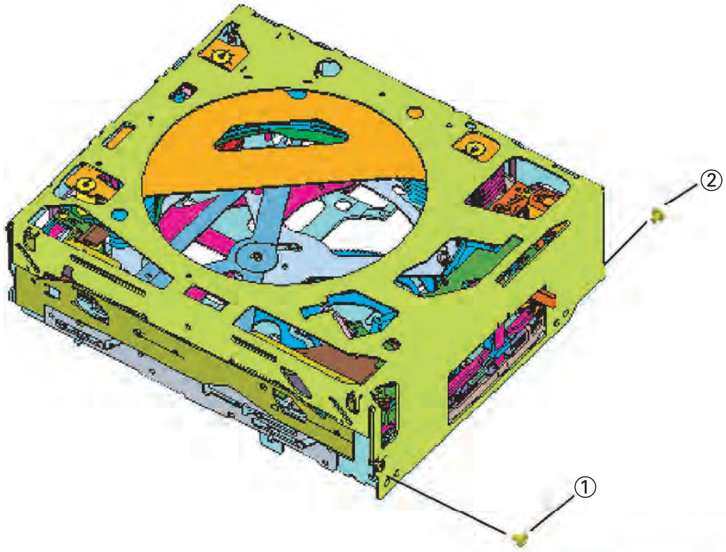
*In the illustration above, the ELEV 3 gear is removed. But the ELEV 3 gear is not required to be removed.

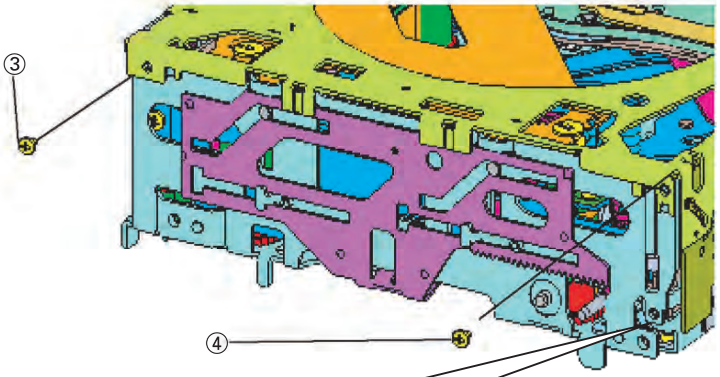
② Manually slide the stair (clockwise) to raise the stage block to the uppermost floor.
③ Remove front right spring A.
④ Change the position of the back left spring B from the home position to a temporary position. (The hook at the temporary position is fixed on the stage. This means that the stage needs to be raised to the uppermost floor to enable easy re-positioning of the spring.)


②
R
Arm
Front
L
F

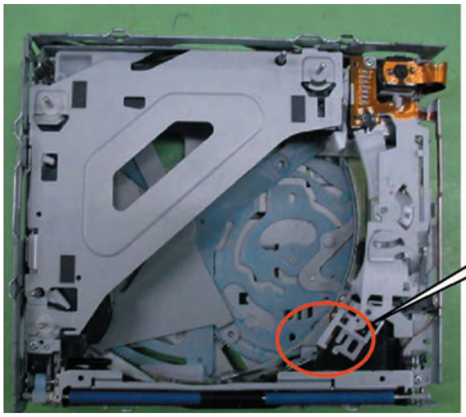

④ Spring B
Home position
③ Spring A
Temporary position

④ Manually slide the stair to lower the stage.
⑤ Remove four screws which are used to secure the upper case. Remove the upper case.
⑥ Lightly slide the snap-fitted top arm to remove it.





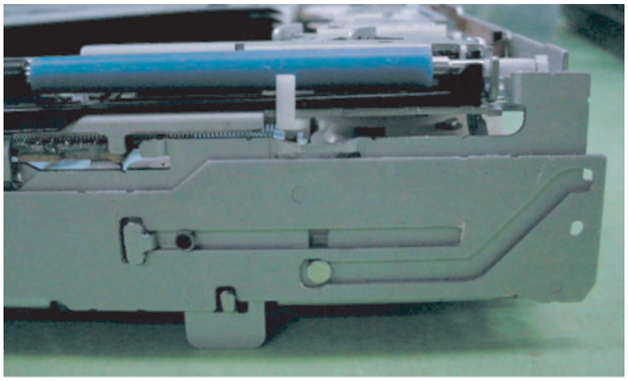
This screw is not required to be removed.



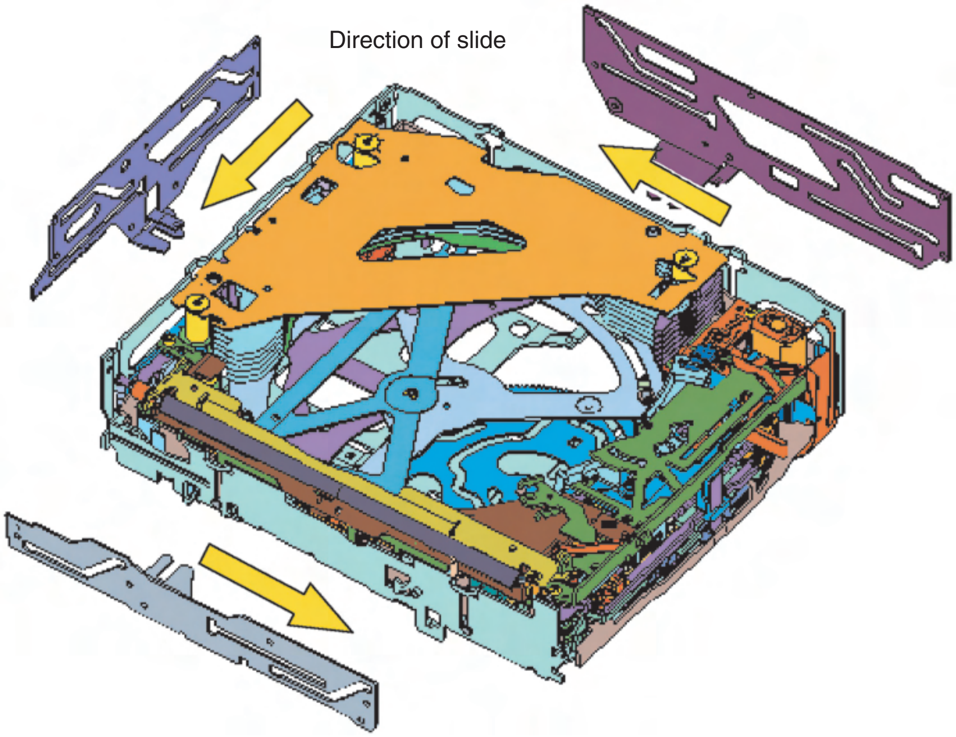
Top arm

3.3 HOW TO REMOVE THE STAIR

① Slide the stair in the direction for lowering the tray block until it will go no further. (See the photo shown below.)

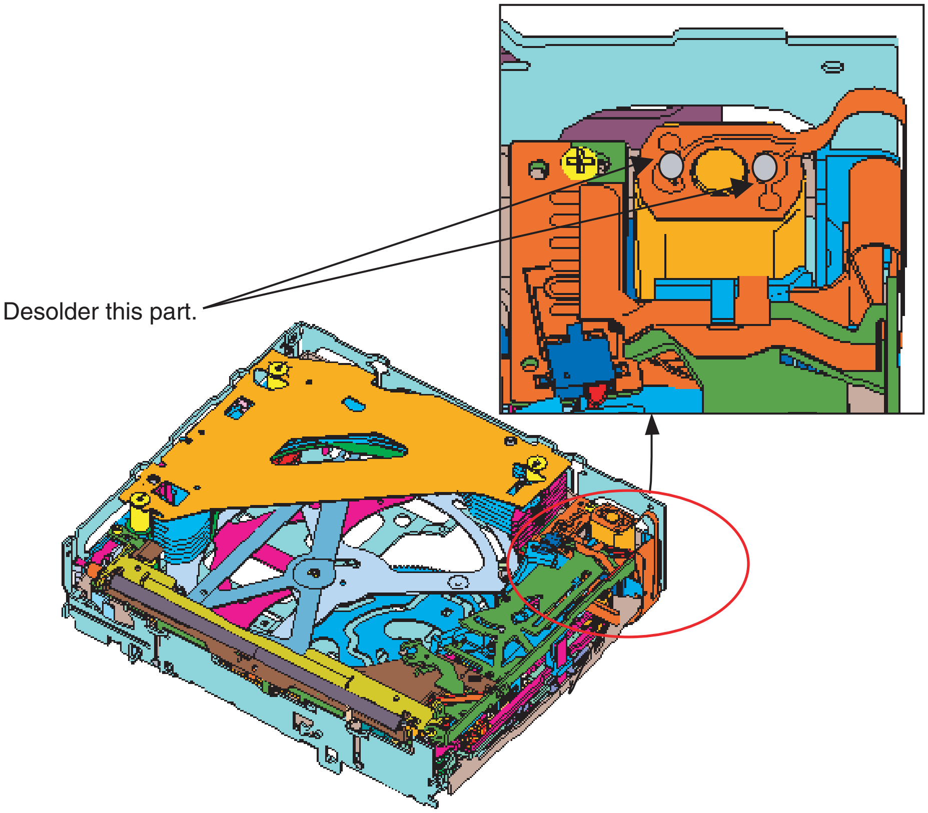


② Remove three stairs.

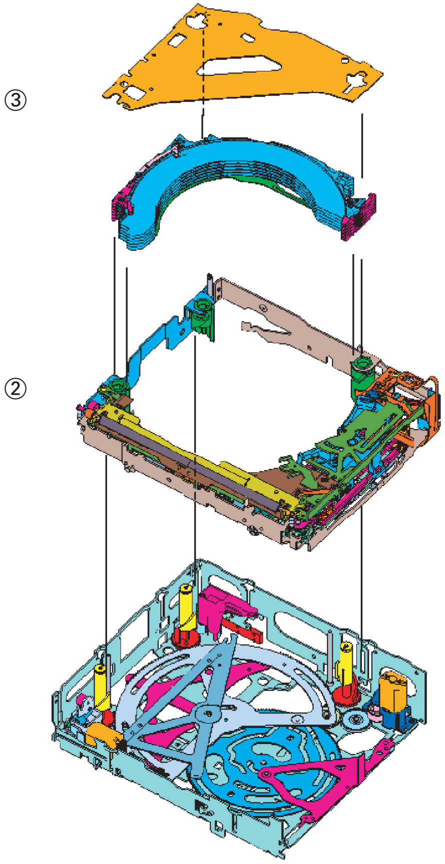

Direction of slide

3.4 HOW TO REMOVE THE STAGE

① Desolder the back right cam motor. Then, remove the flexible cable.

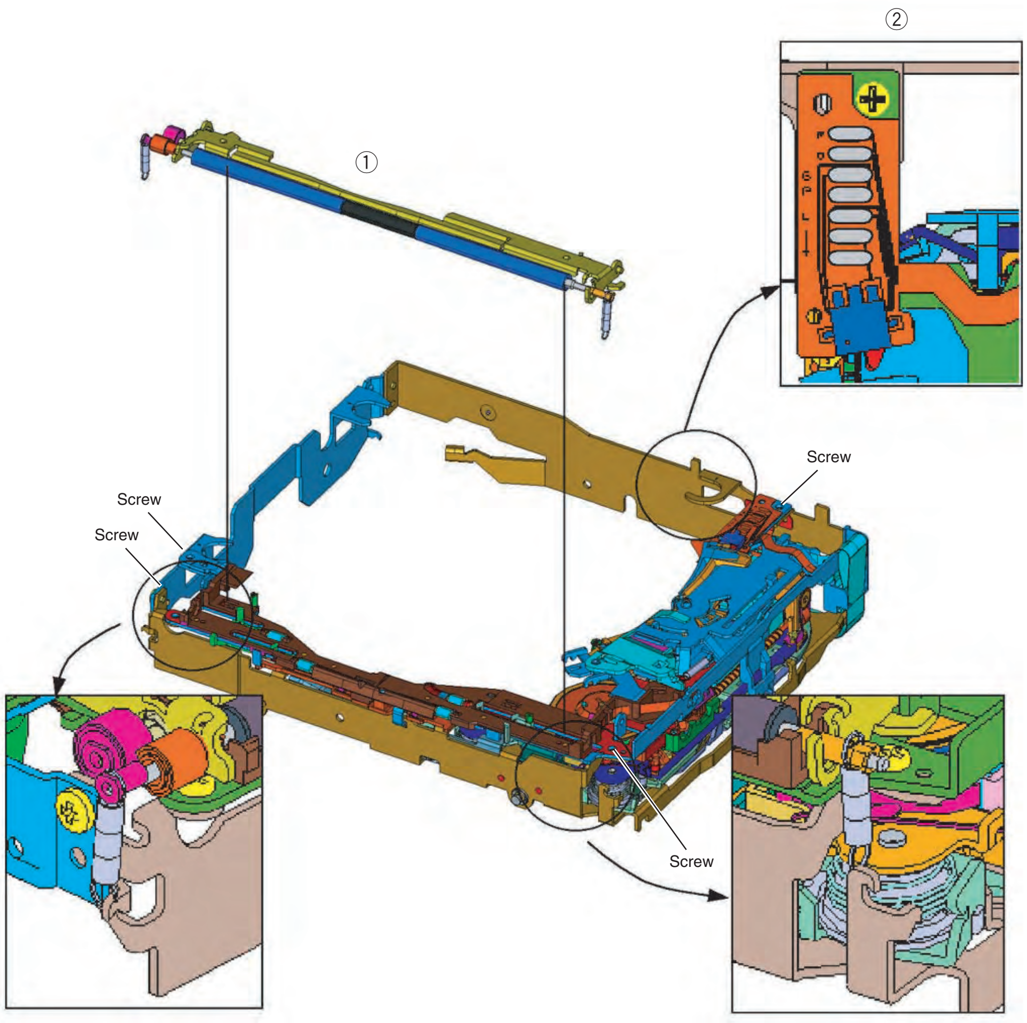


② Draw out the stage block in vertical direction.
③ Lift up the triangular top plate in the vertical direction, then slide it away from you until it comes off.
④ Remove the tray and cylindrical cam from the stage.



3.5 HOW TO REMOVE THE LOAD FRAME

① Remove the springs from both sides of the roller. Remove the roller.
② Desolder and remove the flexible cable.
③ Remove the screws which are used to secure the load frame at four points. Remove the load frame.
Note: Remove springs from metal plate hook, but not necessarily from the resin collar.

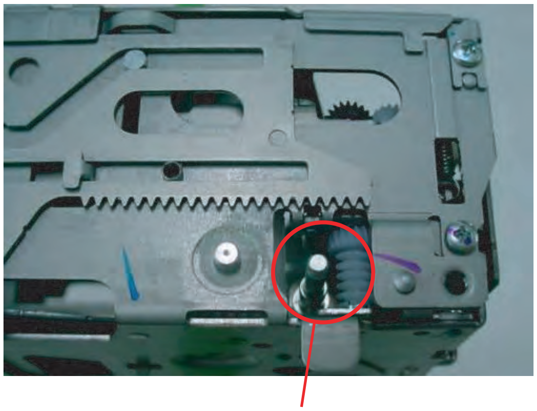


3.6 HOW TO REMOVE THE CRG (ONLY FOR REFERENCE SINCE THIS PROCEDURE IS HARD TO BE COVERED BY OUR SERVICE)

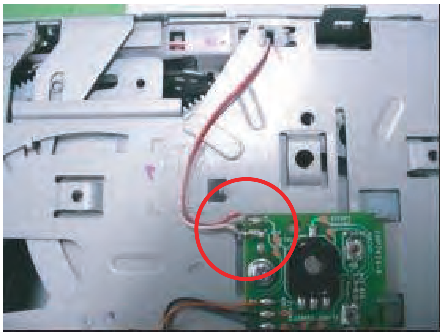
① Slide the part with which the stage link lever is in mesh toward you. Turn the CRG to move it to the play position.
② Remove the resin part and springs.
③ Remove the CRG.

3.7 HOW TO REMOVE THE ELEV MOTOR

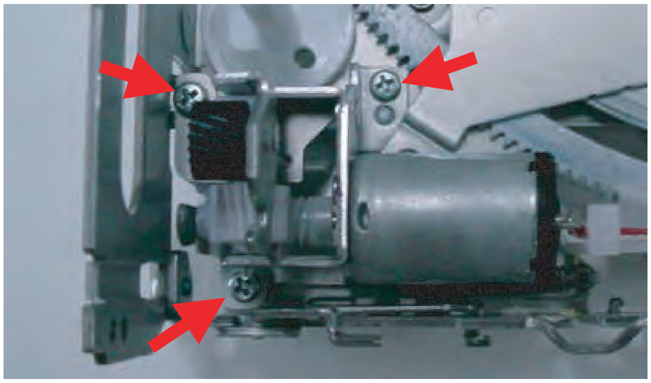
① Check that the ELEV3 gear is removed.



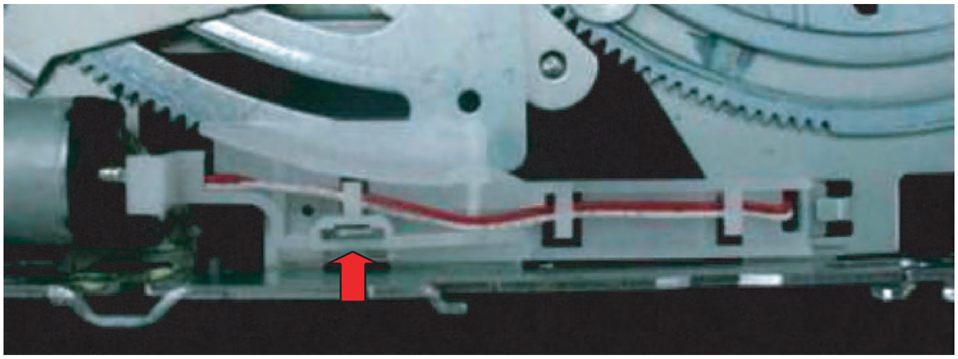
② Remove the solder of two lines (red and white) on the rear side of main chassis.



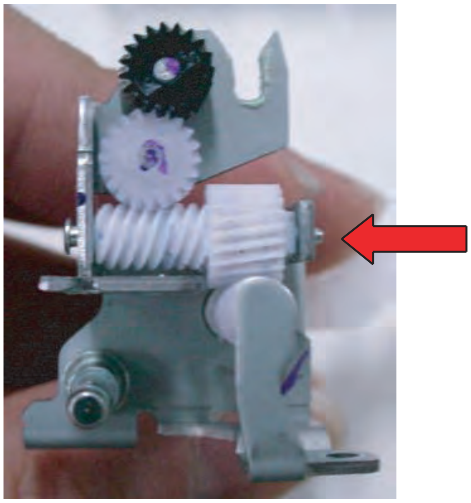
③ Unscrew the three screws shown in the figure.



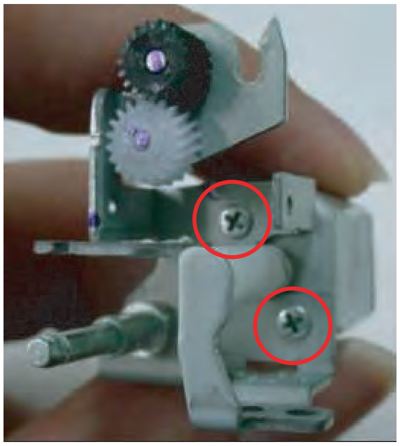
④ Remove the resin part. At this time, it can be removed easily by applying edgewise pressure to the point shown in the figure using the straight slot screwdriver.



⑤ Pull out the gear shaft, and remove the gear.



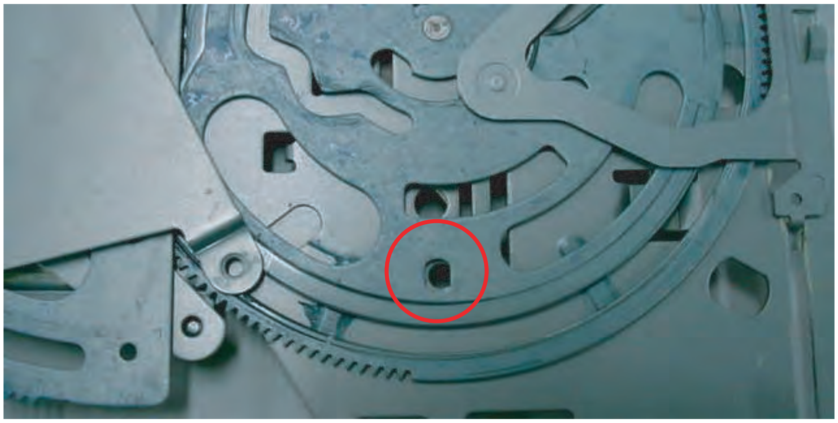
⑥ Unscrew the two screws fixing the motor and remove the wire lead.



4. HOW TO ASSEMBLE

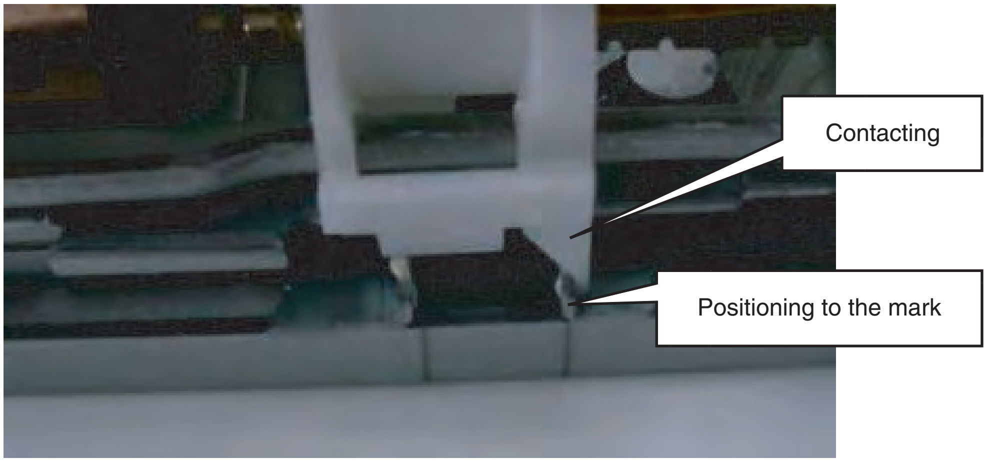
4.1 CHECK BEFORE ASSEMBLING

- Check the location of CAM gear of main chassis.
  As shown in the photo below, check that the hole of main chassis can be seen from the hole of cam (it is not necessary to match it perfectly).



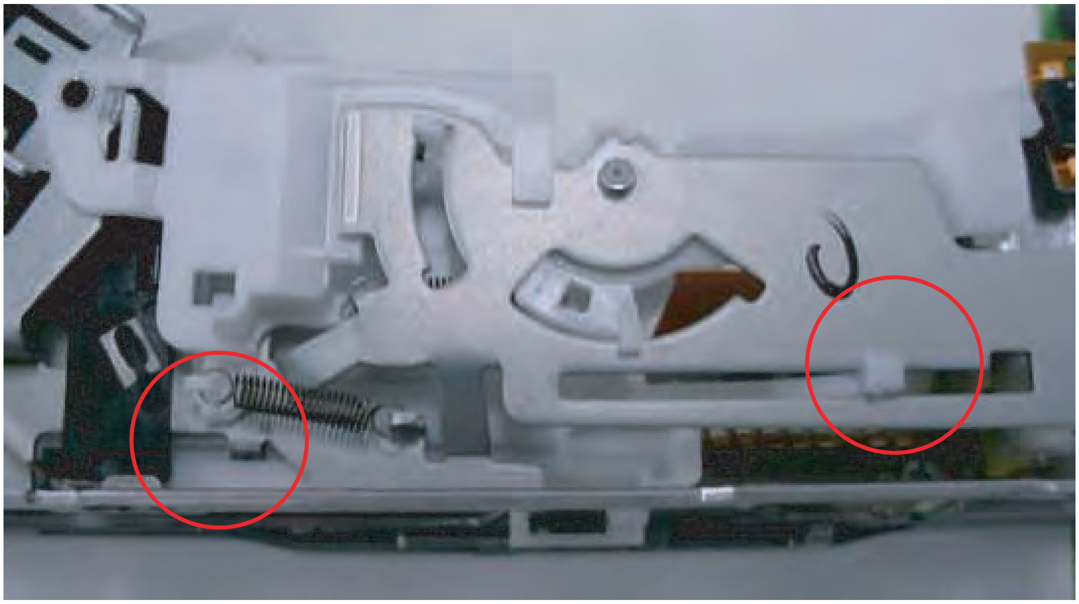
Location of CAM gear

- Check the location of stage lock arm of STG. It is not like as shown in the figure below, move the arm to the position of mark. In a similar way, for the white resin part, move the arm to the position as shown in the photo below.



Location of STG lock arm

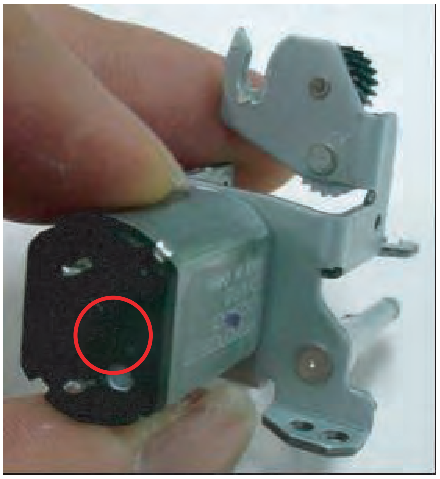
At this time, check the part pointed in the figure does not drop off the groove.
When it is dropping off the groove, set it paying attention to the position shown in the photo below.



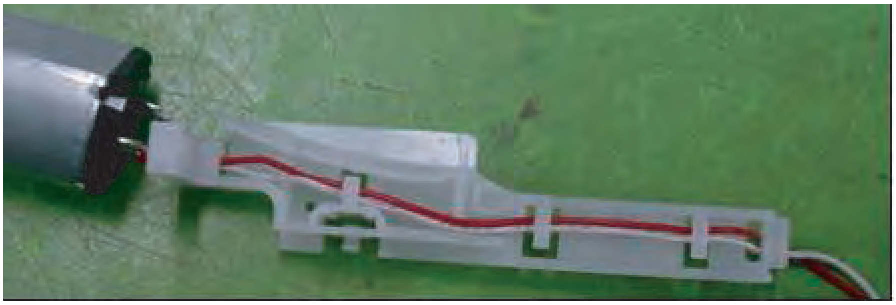
Location to attach the white resin

4.2 ASSEMBLING THE ELEV MOTOR (When the ELEV motor is not removed, this step is not necessary)

· Press the gear into motor, and attach the wire lead.
Connect the white wire lead to the white mark side on bottom panel of motor.

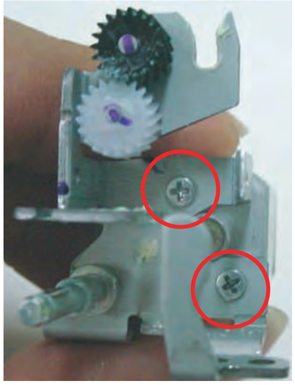


Mark on bottom panel of motor



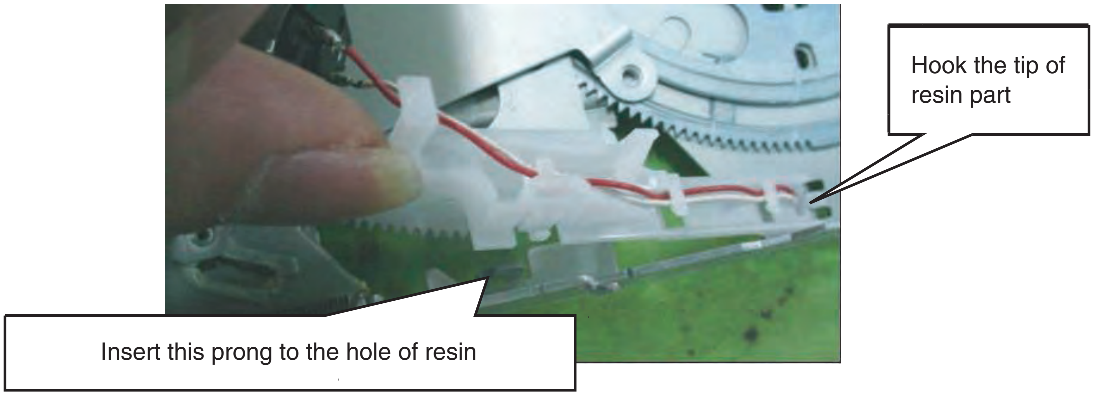
How to connect the wire lead

· Fix the motor to the bracket with screws.



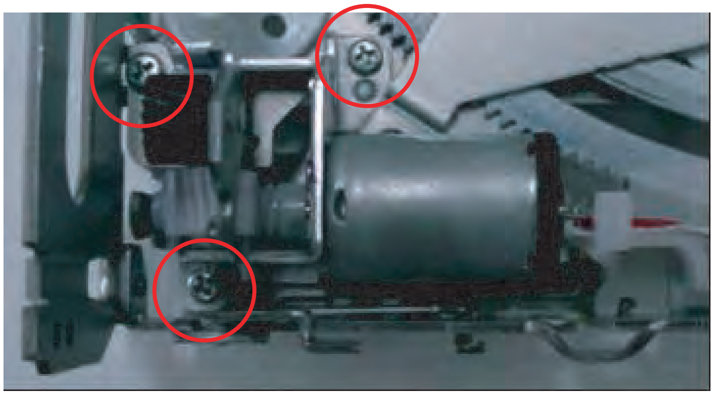
How to fix the bracket

· Fix the resin part to the main chassis.


Hook the tip of resin part
Insert this prong to the hole of resin

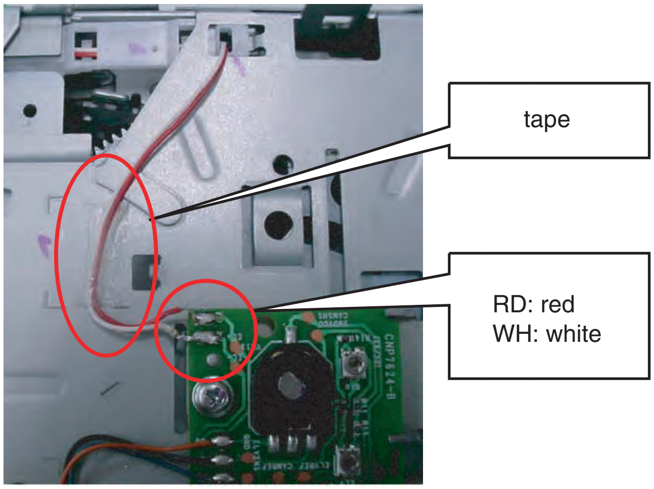
How to fix the resin part

· Secure the three screws.



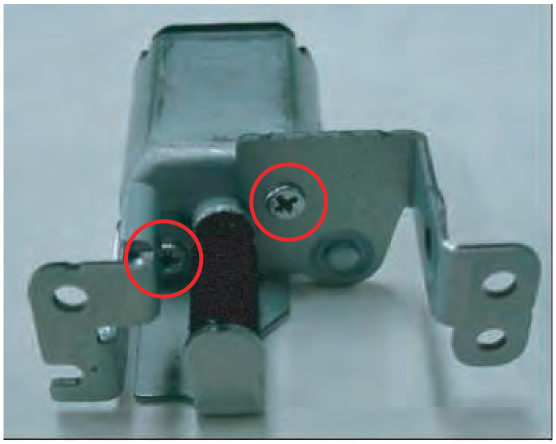
How to fix the ELEV motor unit

· Solder the wire lead to the board on the rear side of main chassis, and fix it with tape.

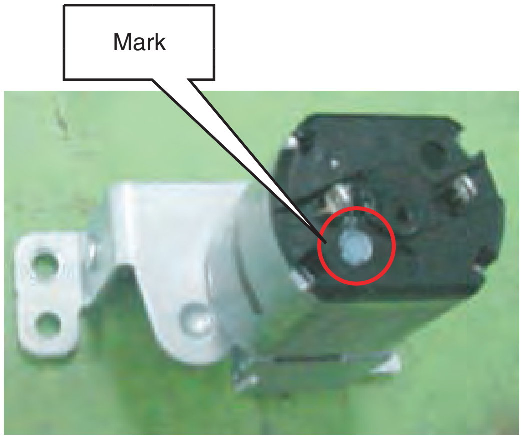

tape
RD: red
WH: white

4.3 ASSEMBLING THE CAM MOTOR

· Press the gear into motor, and fix it to the bracket with two screws.
At this time, take care of the direction to fix the gear. Check the location of mark is as shown in the photo shown in lower right.

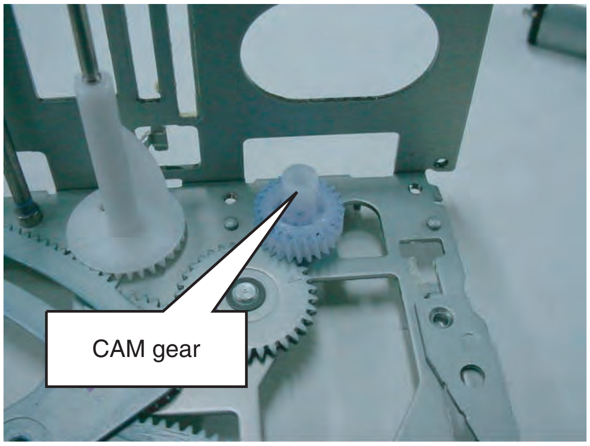


How to fix the motor

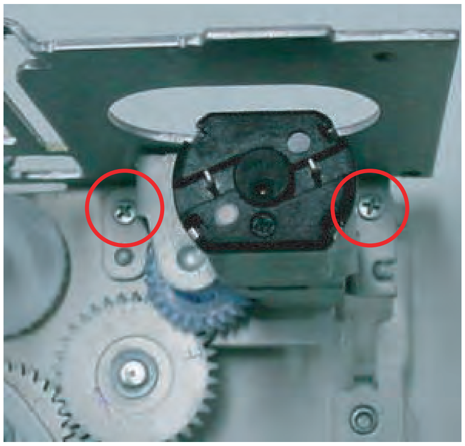


Mark for attaching the motor

· Attach the CAM gear, and fix the CAM motor unit with two screws.



Location to attach the CAM gear



Location to attach the CAM motor unit

4.4 ASSEMBLING THE STAGE UNIT

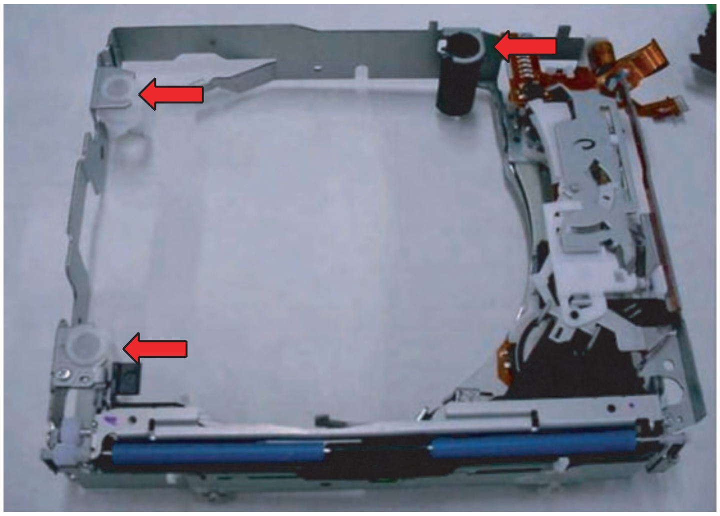
① Prepare the tray.

Pile the 6 trays so that the tray with steel plate is at the bottom.

Tray (6-pile)

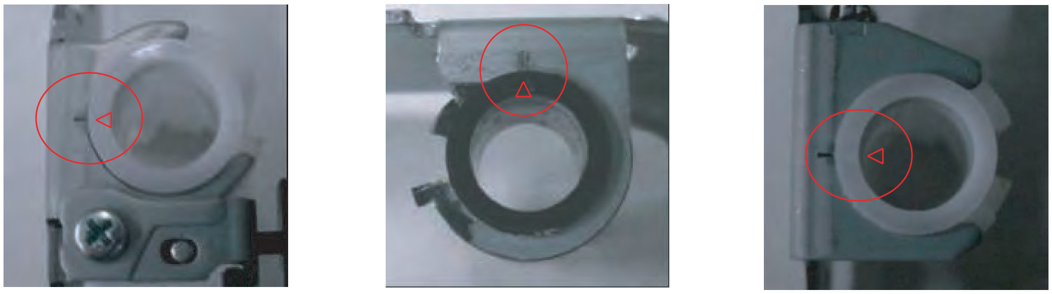
② Prepare the STG.

Attach the cylinder cam OUT to the stage.
At this time, attach the black cylinder cam at the right back.



Location to attach the cylinder cam OUT

Rotate the matched cylinder cam and match the marks of STG and cam (for all cams).



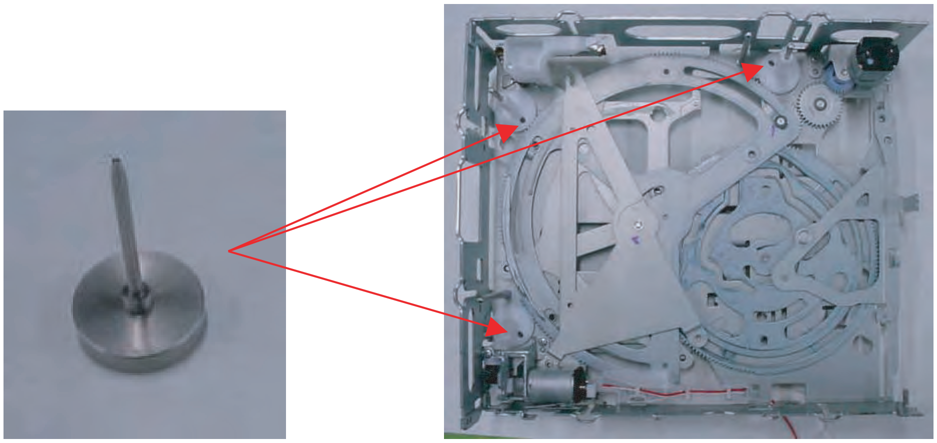
Left back

Right back

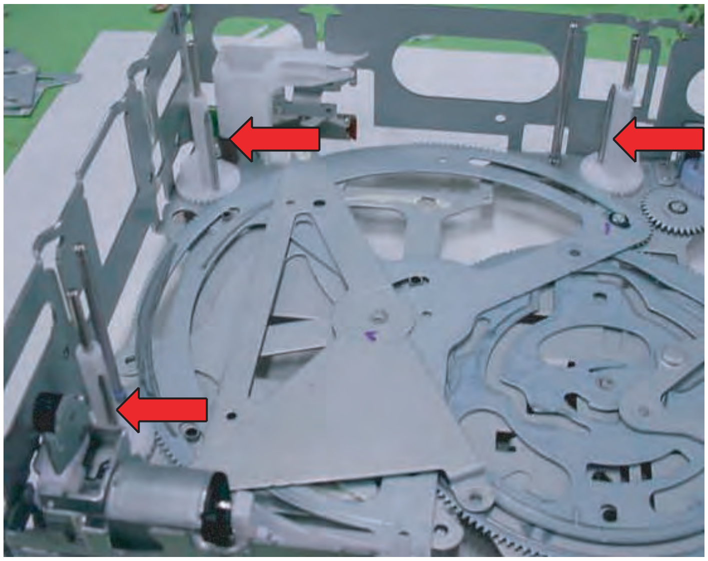
Left front

Location of mark of cylinder cam OUT

③ From rear side of main chassis, insert the assembly jig to the cylinder cam gear (x3).

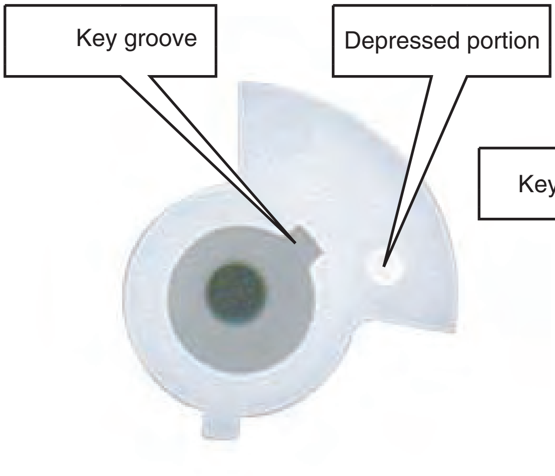


Assembly jig
GGF1538 x 3

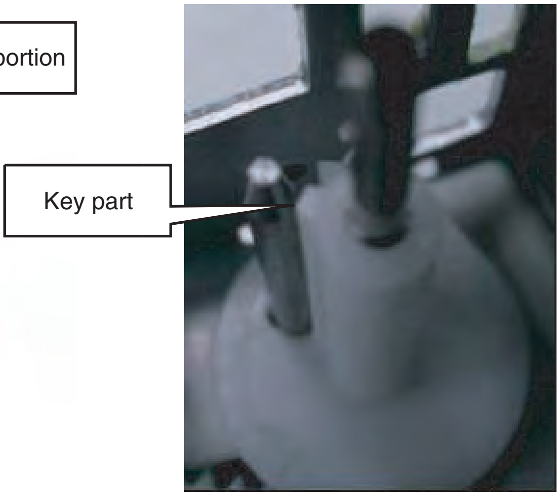


After inserting the assembly jig

④ Insert the cylinder cam IN (x3).
At this time, set the key part of cylinder cam gear to the key groove of inside of cylinder cam IN.
Match the tip of assembly jig to the depressed portion on the bottom panel of cylinder cam IN.

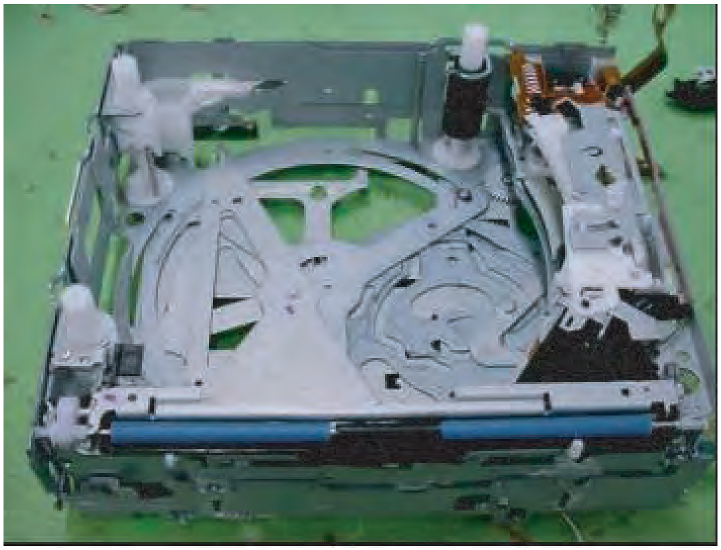


Cylinder cam IN



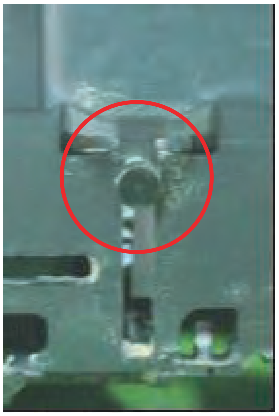
Cylinder cam gear

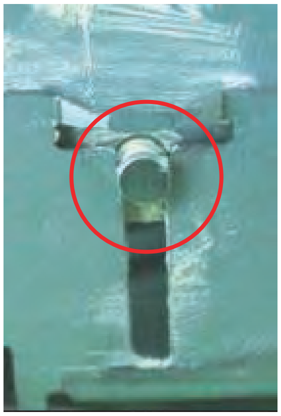
⑤ Attaching the STG.
At this time, as the right front part does not have a bracket, support it with something.

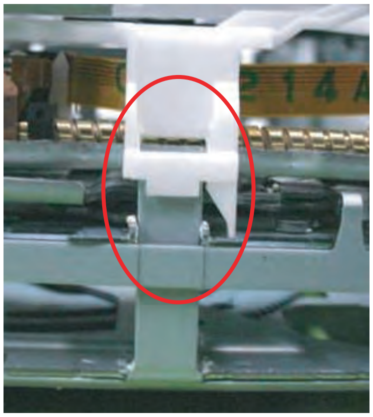


After attaching the STG

At this time, check the three parts shown in the figure below fit.
*Especially, for the right panel, take care so that the metallic bar protruding from the main chassis fits the both of stage link lever and white resin part.

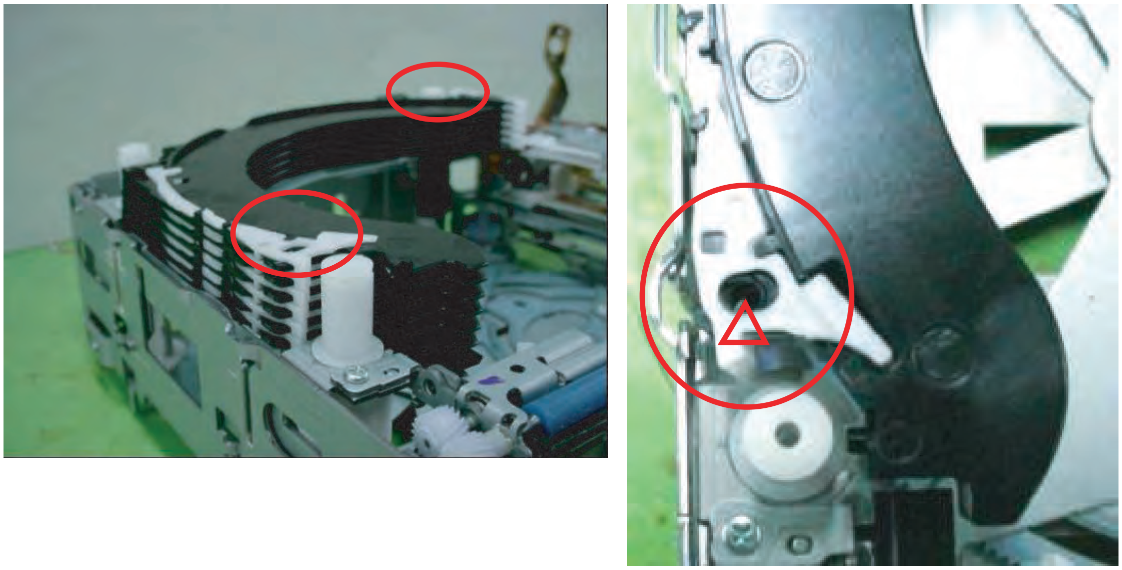

Left front


Right front


*Right panel

* In this operation, take notice that the cylinder cam whose mark is matched in step ② may jolt out of alignment. If it jolts out of alignment, reposition the key groove and mark.

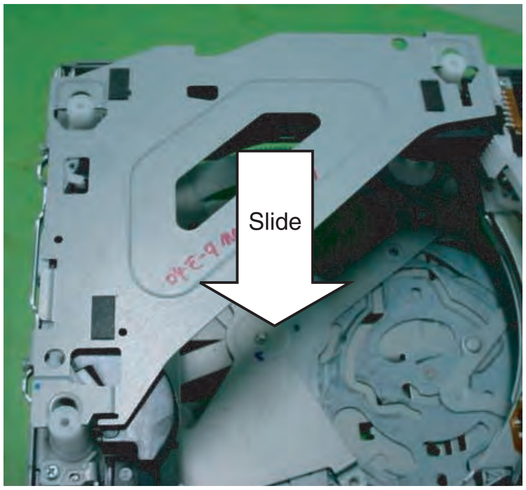
⑥ Place the tray. At this time, the tray pin should be inserted to the location shown in the figure.


State of attached tray

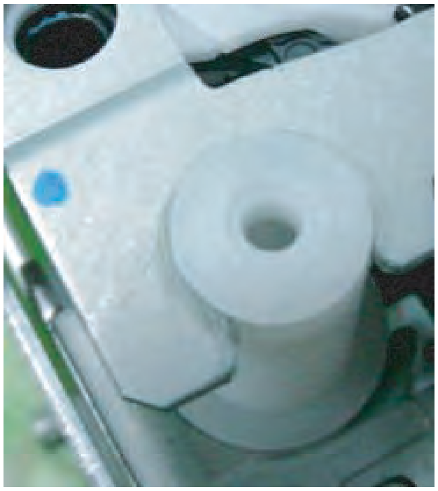
⑦ Insert the tray holder.

Insert the tray holder to the tip of cylinder cam IN, and then slide it to forward and fix it. At this time, take notice that the black sheet on the rear side of tray holder sticks easily in the tray.

Check it is properly set (3 parts) as shown in the figure at lower right.

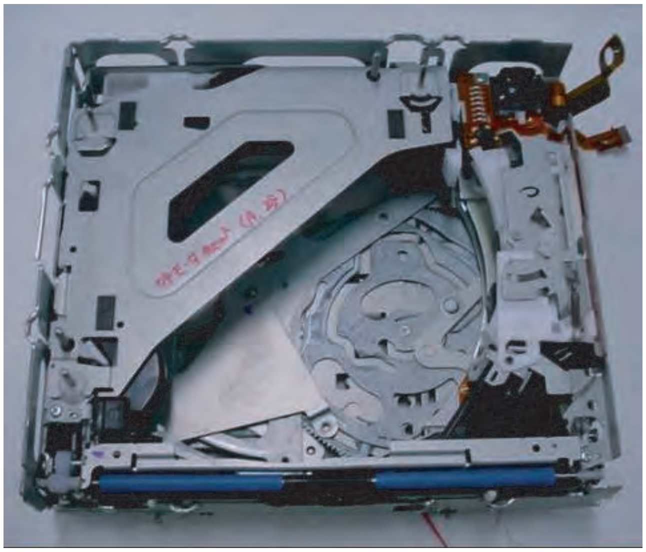


Direction to slide the tray holder



Tray holder rigid part

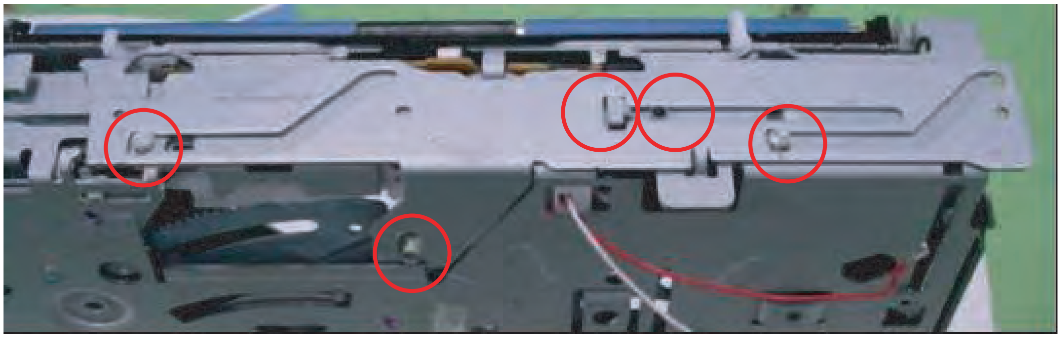
⑧ Pick up the main chassis slowly, and pull out the jig.



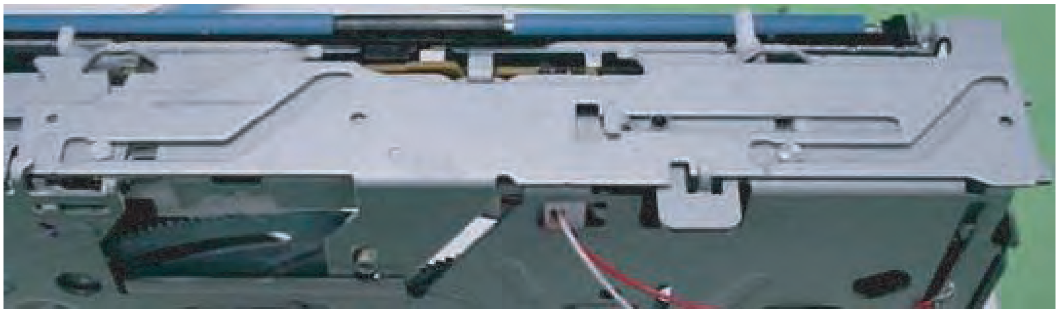
The STG unit is properly assembled

4.5 FROM ATTACHING THE CASE ABOVE TO COMPLETION

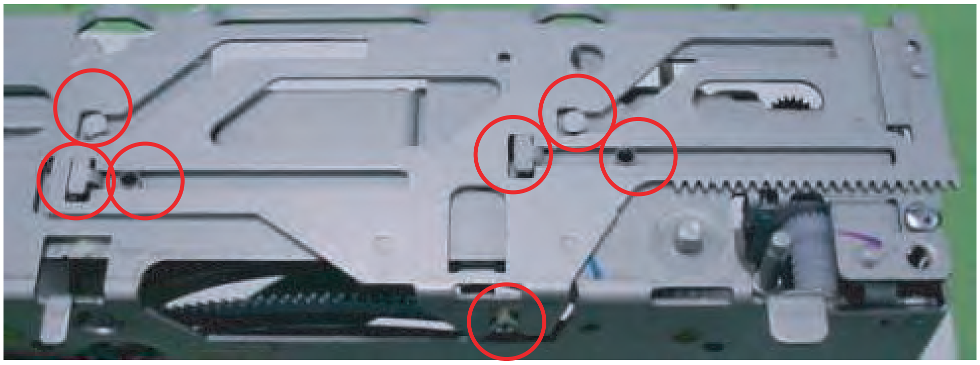
① Attach the front stair.
Check that is properly set (5 parts) as shown in the figure below.



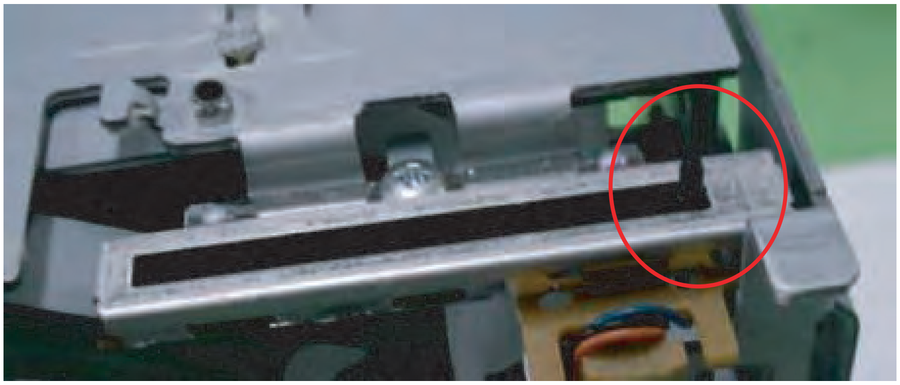
Next, slide the attached stair to left side slightly (figure below).



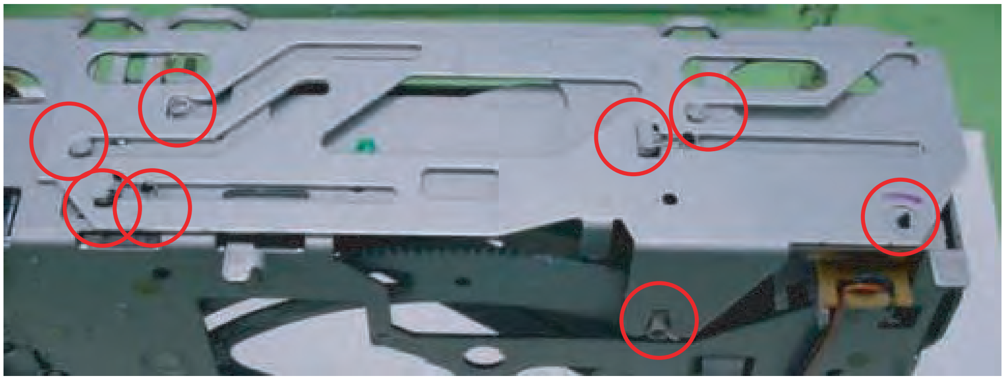
② Attach the stair on left side safe.
Check that is properly set (6 parts) as shown in the figure below.



③ Attach the rear stair.
Before attaching the rear stair, slide the Potentiometer on the rear panel to the location shown in the figure below.



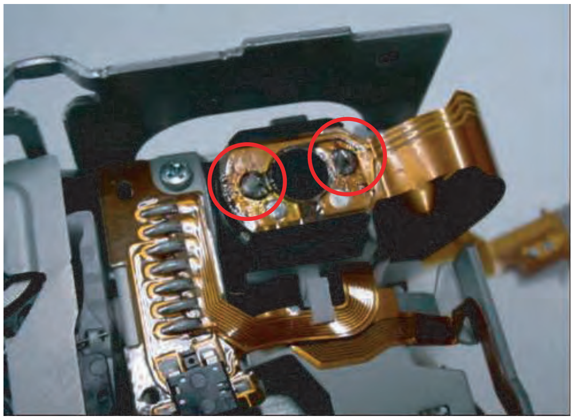
Attach the stair.
Check that the eight positions shown in the figure below are properly set.



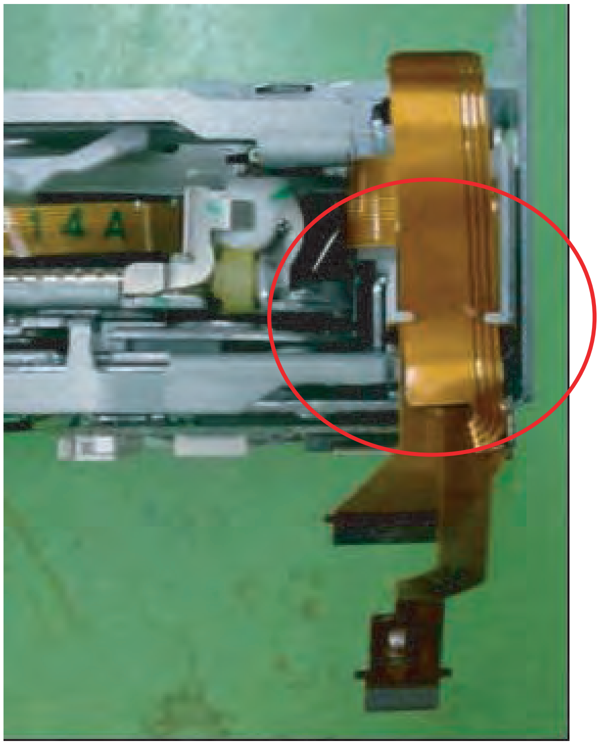
* When attaching the front stair, fix the front side to the upper panel, and when attaching the left panel stair and rear panel stair, fix the side panel to the upper panel.

· Slide the stair to the left.
Check the all stairs are fitted in the groove, and slide the stairs to the left.

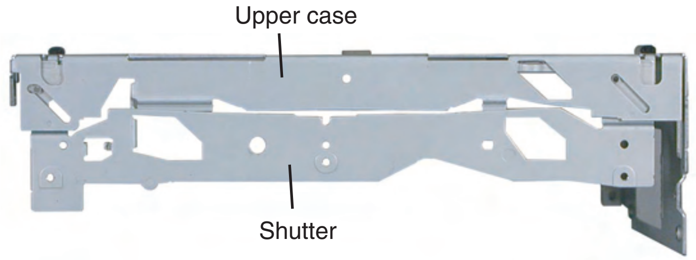
④ Solder the two cam motors.



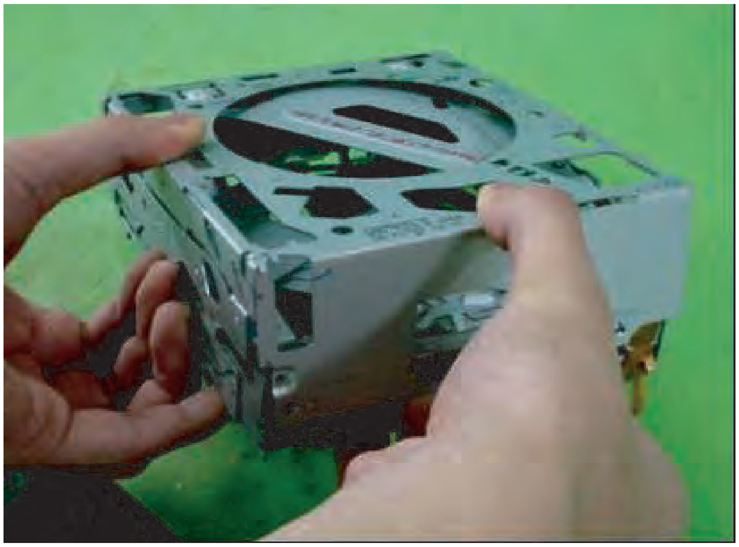
⑤ Check the side panel flexible cable is not removed.



⑥ Fit the shutter and upper case, and attach it to the mechanism unit.

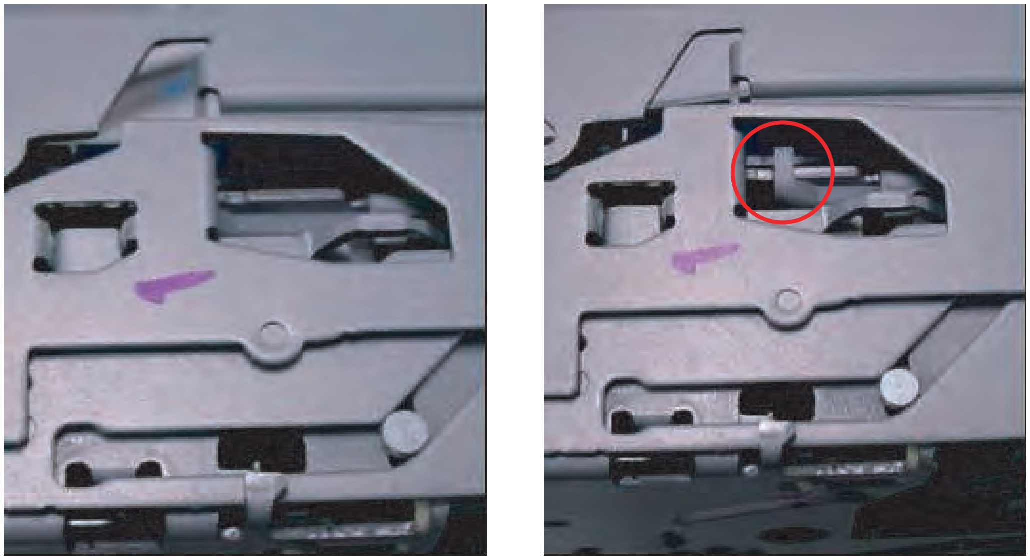


* As shown in the figure below, it is easy to assemble the unit by fitting the right side opening the shutter and right side after fitting the left side. The state of mechanism is recommended to be at 1F play position.



How to attach the upper case

Hook the detection lever of front to the rear side of front panel of shutter.
* Push the detection lever to the left side lifting the left part of upper case.

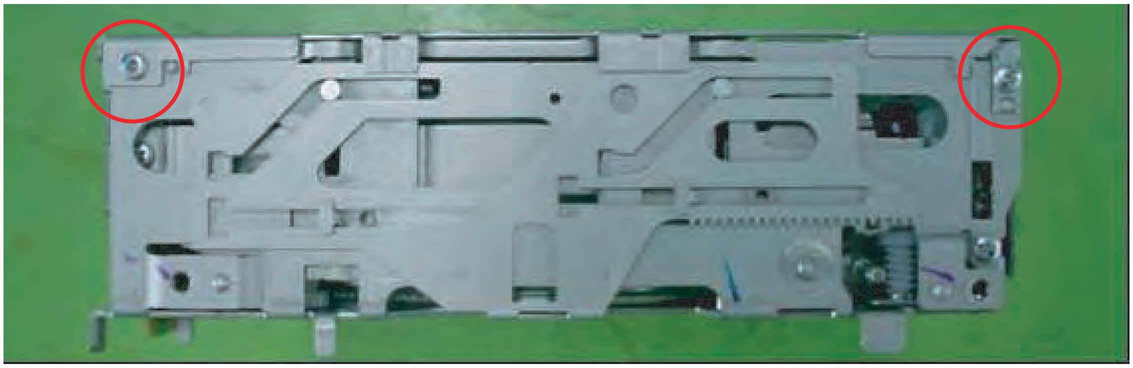


Normal

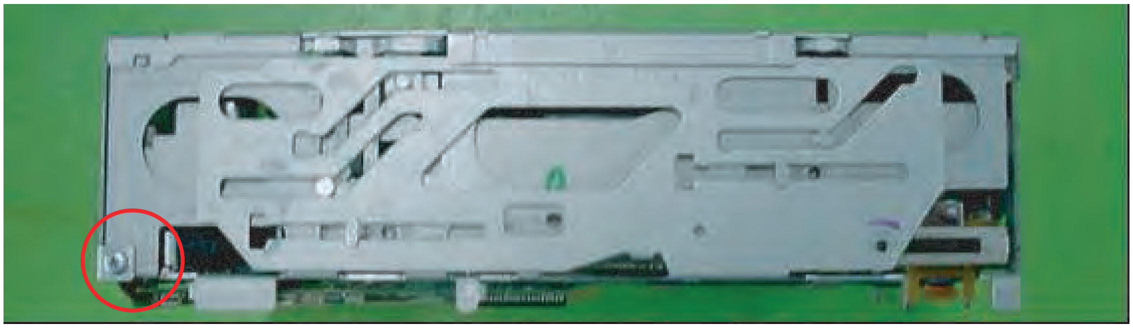
Abnormal

Location of detection lever

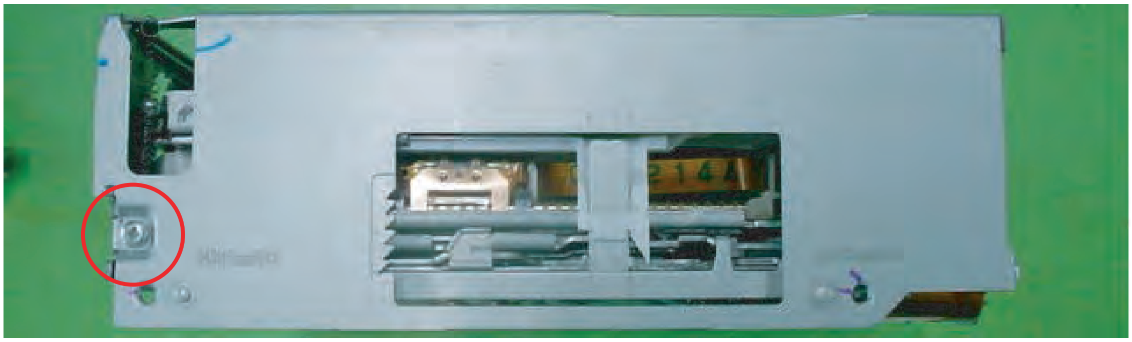
⑦ Secure the screws.
Secure the four screws on the panels below.



Left panel



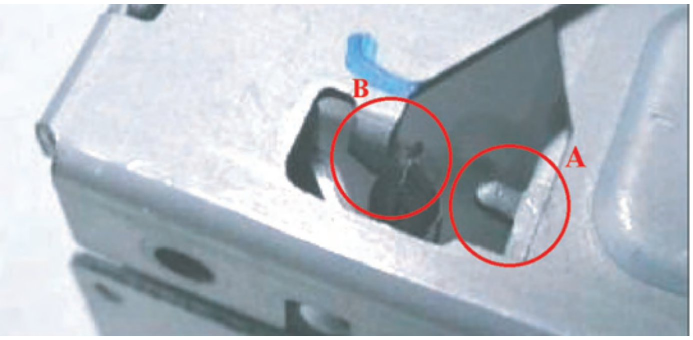
Rear panel



Right panel

A

⑧ Lift the stage to the top floor by sliding it, and hook the spring at left back.
Hook the spring which is temporarily hooked to the A part to B part.

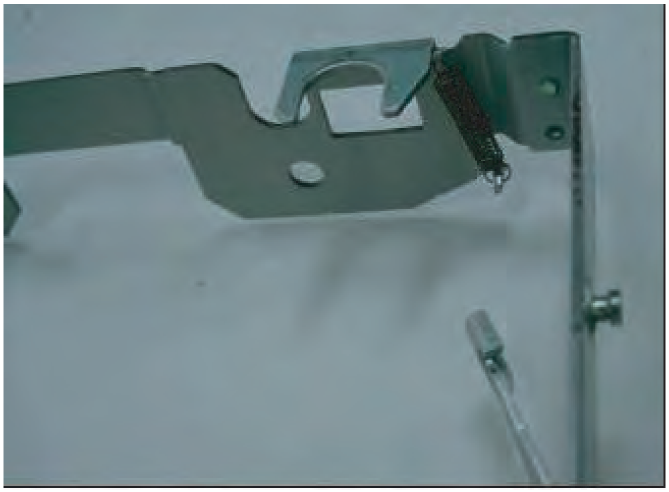


B

Spring of left back part

* If failing to hook the spring, remove the STG again, and hook the spring again as shown in the photo below.

C



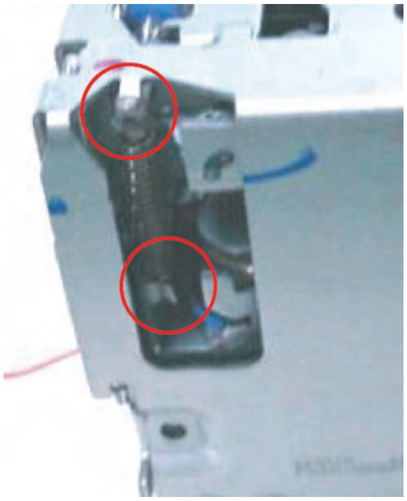
D

Left back part of stage frame

E

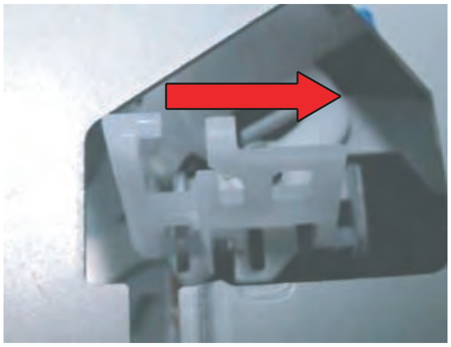
F

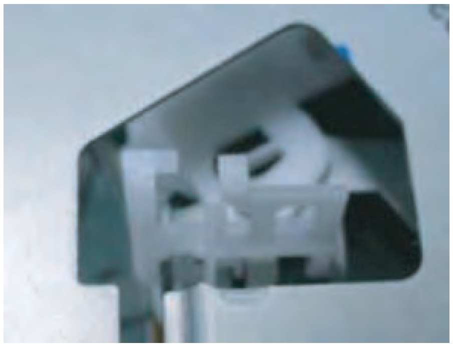
⑨ Hook the right front spring.
Hang the spring on the hook shown in the figure below.



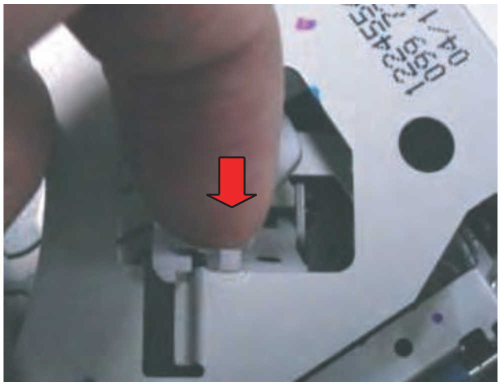
Right front spring

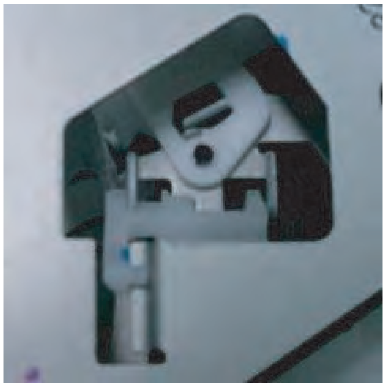
⑩ Attach the top arm.
As shown in the figure, attach it sliding it aside after insert it vertically from above.



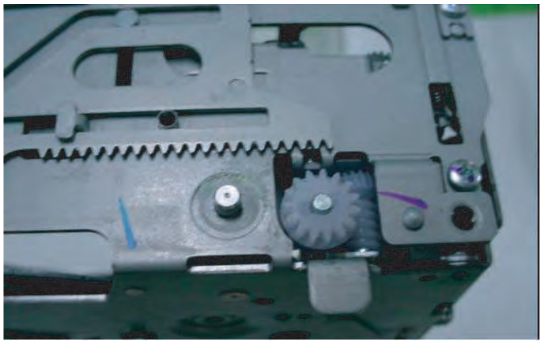


A stage mechanism is lowered.
(Since the stage mechanism has been raised with ⑧, a top arm is not attached unless it lowers.)
As shown in the photo below, press it with a finger, and set it as shown in the right figure.



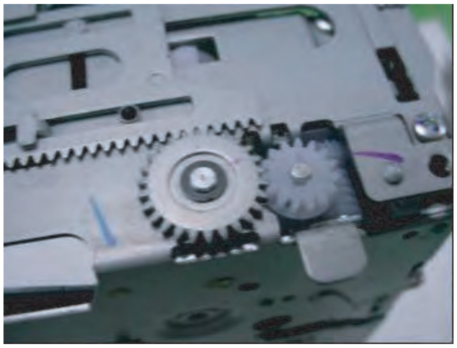


⑪ When the ELEV3 gear is removed, set it by pressing as shown below.



ELEV3 gear

Attach the ELEV4 gear, and fix it with poly washer.



⑫ Insert the two flexible cable as shown in the figure below, and slide and lock the claw, and then remove the short-soldering.